FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

NOVEMBER, 1946

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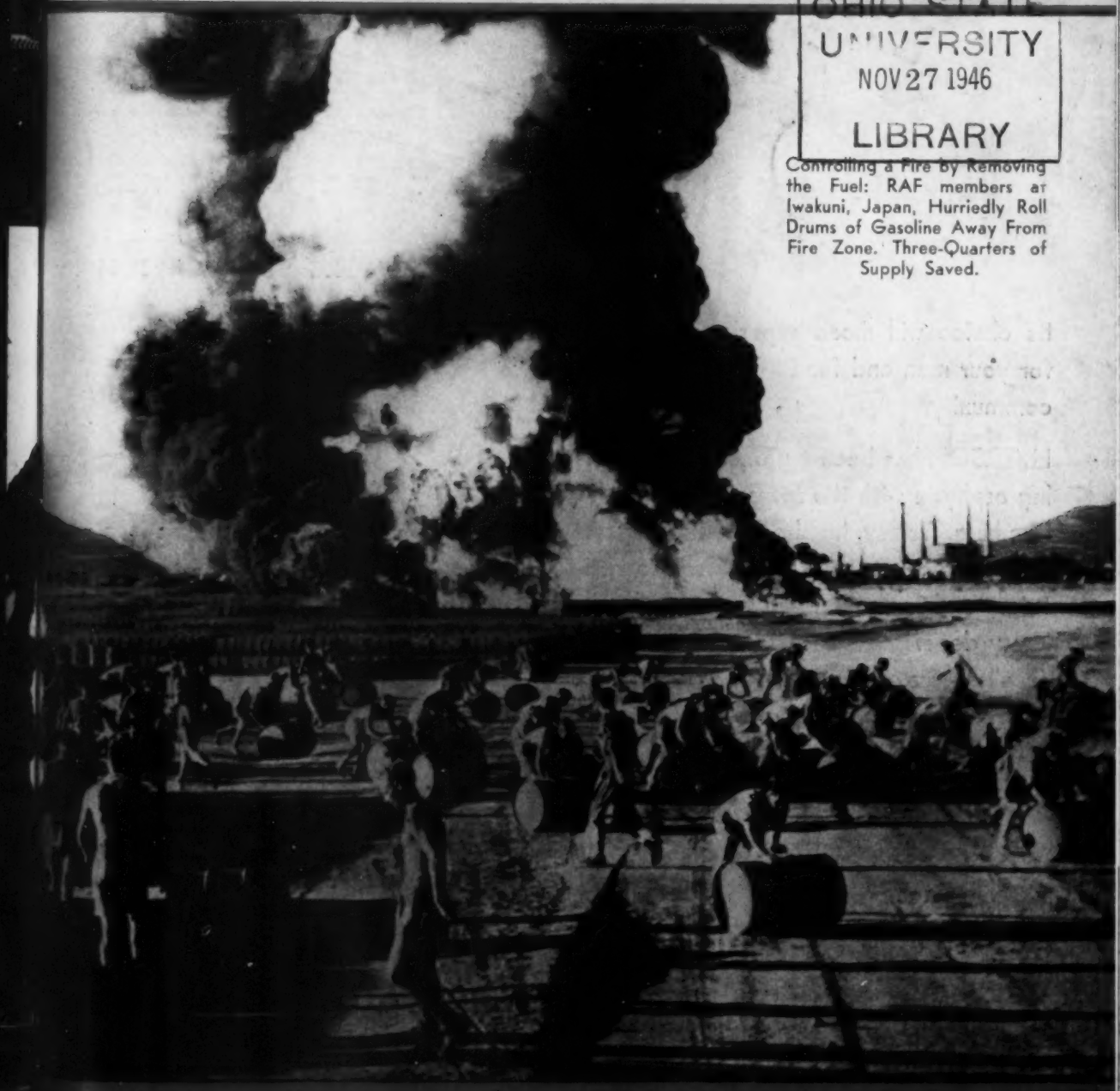

Controlling a Fire by Removing the Fuel: RAF members at Iwakuni, Japan, Hurriedly Roll Drums of Gasoline Away From Fire Zone. Three-Quarters of Supply Saved.

A CASE · SHEPPERD · MANN PUBLICATION

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WHEN FIGHTING DEATH

BY DROWNING

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the *new* TRAFFIK-KING Siren

The POSTWAR Signal

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NEW PERFORMANCE • NEW ROCKET-TYPE DESIGN
NEW STREAMLINING WITH THE NEW PROPELLO-RAY LIGHT

Postwar traffic demands the best. You will have it in the Model C-6 Traffik-King combining the smooth silent PROPELLO-RAY light with the most powerful coaster siren.

The PROPELLO-RAY light is offered as a separate unit to supplement any existing signals you may now have on your apparatus. Ask for Bulletin 113.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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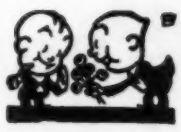
FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor



Orchids!

THIS month we want to hand well-deserved orchids to a group that seldom receives bouquets.

- For lo, these many years, there has been a small army of men who, although not *of* the fire service, are nonetheless a very important factor in its welfare and progress.
- We refer to those "ambassadors-at-large"—the "promotional plenipotentiaries"—the sales and engineering representatives of the manufacturers of fire apparatus and equipment.
- Theirs is no bed of roses. When the public purse is zipped tight, they find orders tough picking. When, like the present, their products are badly needed and orders are plentiful, it is difficult to make deliveries!
- Yet, when the fire chief has to plan his development programs, set up his fire budgets and "sell" badly needed improvements to his skeptical community officials and taxpayers, these representatives take up the cudgels for him. (And all-too-often they receive scant reward for their services.)
- And so we say orchids to these unsung "ambassadors" of the fire service! May they receive the rewards to which they are so well entitled!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U.S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1946, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

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"Specialized Leadership"

American-LaFrance Type 700 Centurion Pumper, powered with 600 h.p. V-12 Type 750—750-gallon Triple Combination Fire Apparatus with 2 Man Cab. Apparatus is fully equipped including a rear suction arrangement.

BUFFALO better-built

MOTOR FIRE APPARATUS

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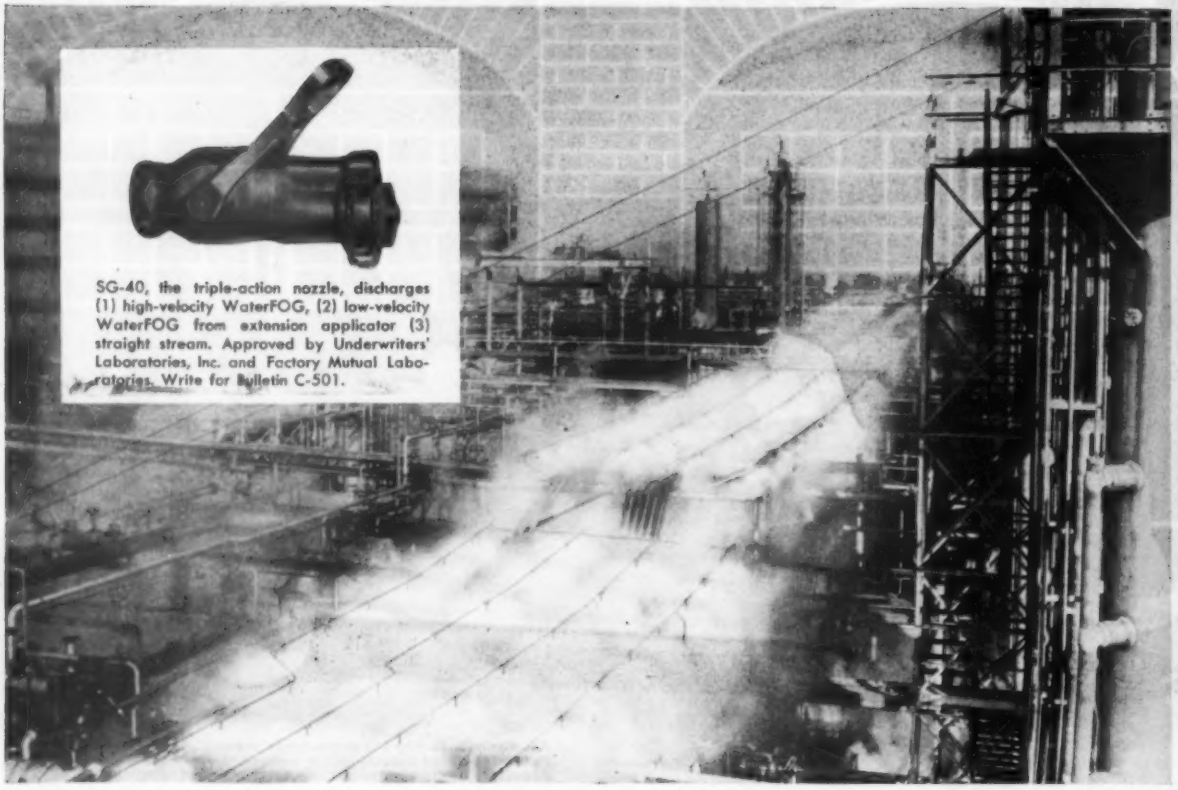


SG-40, the triple-action nozzle, discharges (1) high-velocity WaterFOG, (2) low-velocity WaterFOG from extension applicator (3) straight stream. Approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories. Write for Bulletin C-501.

WaterFOG THROWS A BLANKET OF PROTECTION OVER A REFINERY "DANGER SPOT"

In the big petroleum refineries, fire anywhere in the complicated pipe line systems is a very serious matter. At best, it is bound to halt production; at worst, it can cause incalculable damage if not quickly brought under control.

The photograph shows how one prominent refinery takes care that any fires in a vast network of piping will be stopped before they have a chance to spread and do serious harm. The cloud you see is WaterFOG, tiny water particles much finer than spray, which the Rockwood-engineered system of fixed piping is releasing over the entire area. This all-enveloping covering cools the blaze . . . shuts off the oxygen . . . quickly confines, smothers and controls the fire — a real blanket of protection!

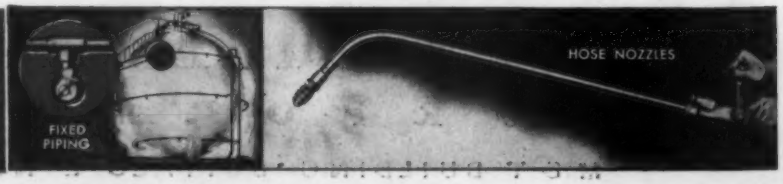
Versatile Protection

WaterFOG fixed piping systems are today protecting transformers, paint shops, quench tanks, degreasing machines, enameling ovens, coating machines and many other important types of processing and operating equipment. And Rockwood portable WaterFOG equipment — nozzles and applicators for attaching to regular hose lines — has proved particularly effective, not only in fighting flammable liquid fires, but in extinguishing Class "A" fires in wooden structures, rubbish, etc., *at ordinary pressures*.

Bulletin 123 describes how WaterFOG puts out fires faster, protects lives and equipment, reduces water damage. Send for it, and ask about Rockwood's thrilling natural-color movies (16 mm.) showing WaterFOG in action. ROCKWOOD SPRINKLER COMPANY, 54 Harlow Street, Worcester 5, Massachusetts. *Specialists in Fire Protection Engineering, Equipment, and Installation since 1907.*

Water Engineered by Rockwood Cools, Confines, Smothers Class "A" and Oil Fires

ROCKWOOD WaterFOG



The fire engine more than paid for itself today!

According to Chief Kirby MacKinnon, this remark was commonly heard in Amboy, Illinois, the day this Mack handled a big farm fire on the edge of town.

A barn, 48' by 114', loaded with hay and straw, was struck by lightning and burning fast. 15' distant, the corn crib and other buildings ran east and south in straight lines. Changing winds threatened these buildings. Amboy's fire-fighters pumped from a creek by using a spray on one line and moved between the barn and crib to work a straight stream off another line onto the other buildings. Town people were amazed that the other buildings were saved!

Chief MacKinnon writes: "... the firemen have something (Mack) to work with, and can do a real job ... We saved $50,000 by keeping the fire to the barn!"

Amboy's Mack is equipped with a two stage, pressure volume, centrifugal type pump—introduced by Mack—and a powerful six cylinder engine. Its ability to last longer and work harder has not been surpassed in 36 years!

Get the fire engine that offers your community the utmost in protection. Get the new Mack fire fighter. It pays for itself!

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Mack
FIRE APPARATUS

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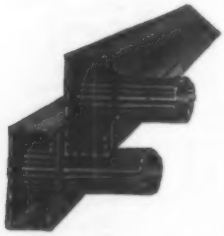
feature

TUBULAR STRENGTH

Duo-Safety all aluminum fire ladders are now used as standard equipment by more and more Fire Departments throughout the country, acceptance won because of strength plus lightness, and faithful, safe service. Only the finest materials are used, only the most skilled workmanship goes into the designing and building of these fine ladders. Play safe with Duo-Safety fire ladder equipment.

and the companion series **700A** *for* **PUMPER USE**



This series 700A is a companion ladder to the 500A series. The 700A series is designed for Pumper Use and built in channel rail construction, all aluminum. Available in 2 section, 3 section, wall ladders and roof ladders.

Write for descriptive literature.

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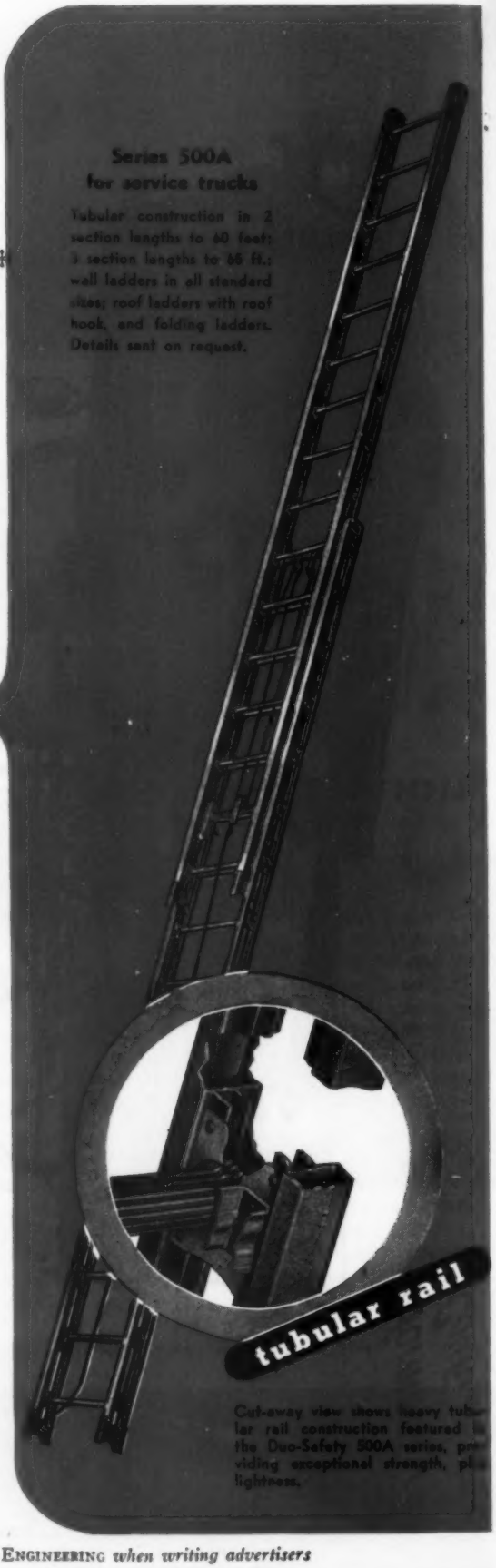
Series 500A for service trucks

Tubular construction in 2 section lengths to 60 feet; 3 section lengths to 85 ft.; wall ladders in all standard sizes; roof ladders with roof hook, and folding ladders. Details sent on request.



Cut-away view shows heavy tubular rail construction featured in the Duo-Safety 500A series, providing exceptional strength, plus lightness.

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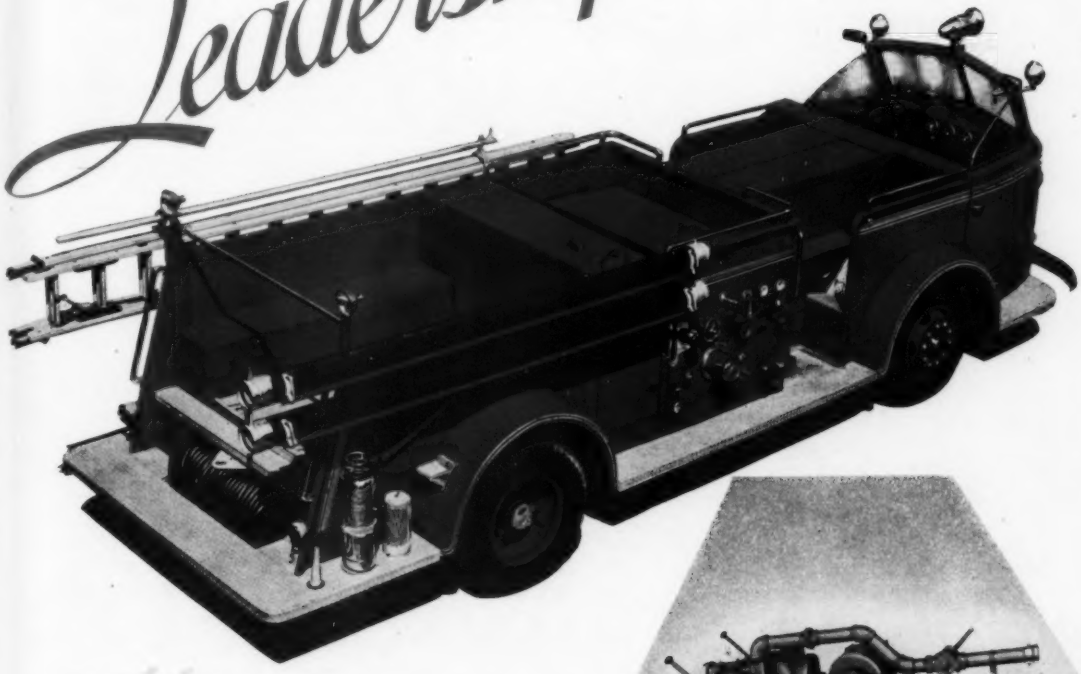

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Rear suction or front suction if desired. Auxiliary 2½ inch suction inlets also available.

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LA FRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO, 9, ONTARIO, CANADA

ALFCO

SPRINGFIELD, N.J.

Can Now Handle 3 Patients At Once

with the E & J RESUSCITATOR INHALATOR and ASPIRATOR

FIRST CHOICE IN FIRST AID

FIVE years ago, the progressive Springfield, N. J. Fire Department, under the leadership of Chief Charles Pinkava, purchased its first E & J Resuscitator, Inhalator and Aspirator. So satisfactorily has been their experience with it these many years, they have now replaced it with the latest model E & J, one that can handle as many as three patients simultaneously!

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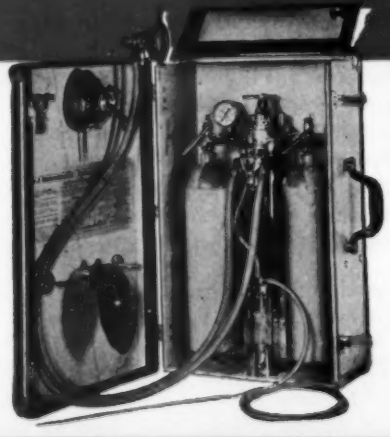
Your community, too, deserves this dependable life-saving protection that can be assured when you get the best mechanical resuscitation equipment that money can buy—the modern E & J —the choice of the nation's fire service.



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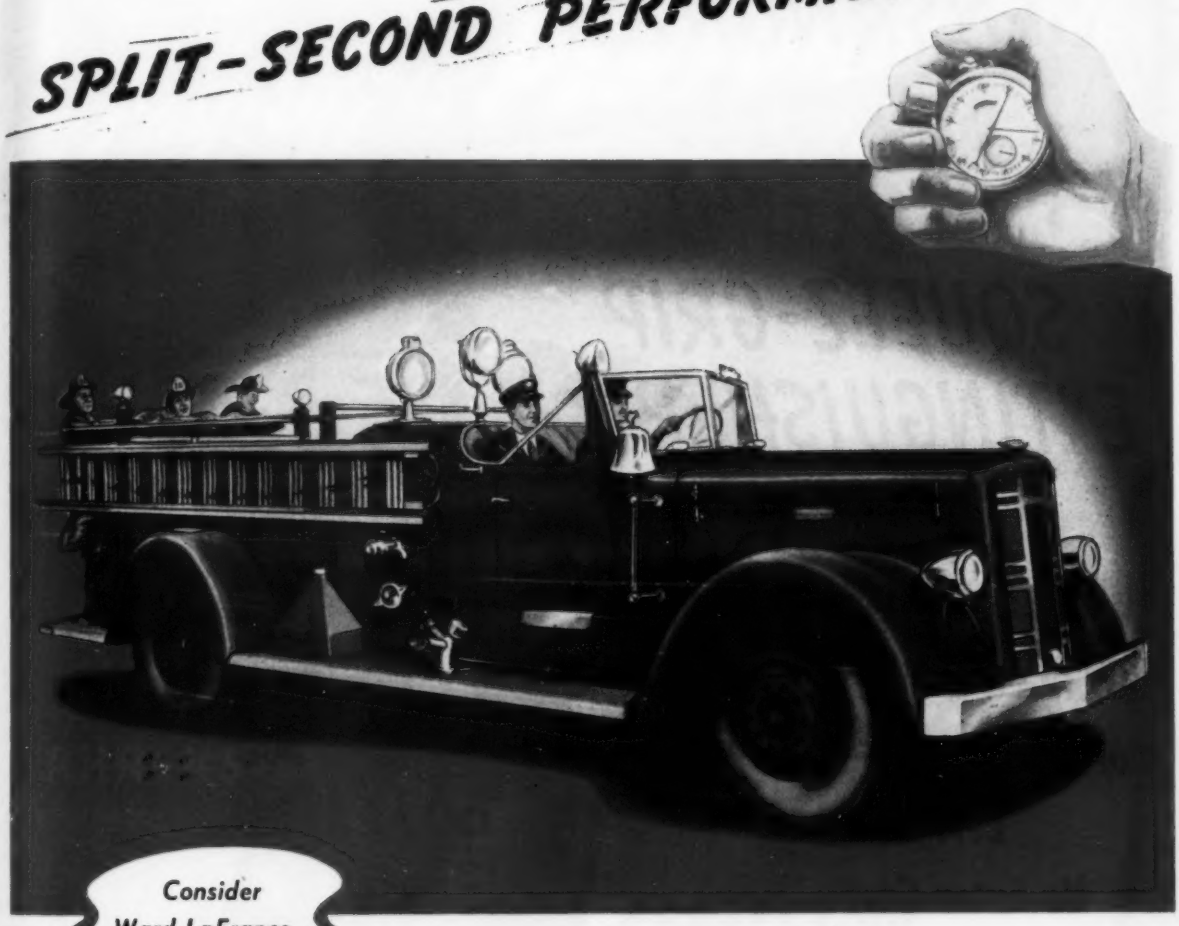

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Specialized fire engineering for over twenty-five years, gives Ward LaFrance Pumpers split-second performance — from the alarm bell to full stream operation.

Built to meet any emergency with unfailing service, the Ward LaFrance Triple Combination Pumpers have quick hose hookup; ground position pump controls; fully automatic clutch; easily-accessible equipment; finger-touch maneuverability gained by special front axle; short-turn radius; and, in every respect, fast action that eliminates the unwieldy, cumbersome characteristics of old fire trucks.

Your community's fire service needs a modern Ward LaFrance Triple Combination Pumper. Write Ward LaFrance today for experienced advice on the pumper for your locality. Illustrated bulletins sent free on request.

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New and larger portables with the original Squeez-Grip valve—the Navy Standard—that made C-O-Two world famous in the fire fighting field. These new portables have more punch, weigh less and have a longer effective discharge. The completely insulated swivel tube and discharge horn is an integral part of the Squeez-Grip valve. Easy to operate—one hand control—squeeze to open, release grip to close. C-O-Two kills flammable liquid and electrical fires in seconds with clean, dry, non-damaging, non-freezing and non-deteriorating carbon dioxide gas. C-O-Two will not harm machinery, equipment, material, fabrics, finishes, or food. No after-fire-mess to clean up. C-O-Two is modern fire protection. Now you get additional C-O-Two protection at no extra cost.

C-O-Two is our registered trade mark and corporate name. Be safe, specify C-O-Two when ordering.

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July 26, 1946

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We have had several other makes of fire engines but none have measured up to the high standards of dependability and economic operation of the Ahrens-Fox fire engine.

I give my unqualified endorsement to your product, I believe it is the finest fire engine on the market.

Very truly yours,
John N. Terry

JOHN N. TERRY
Fire Chief

AHRENS-FOX

FOR DEPENDABLE FIRE PROTECTION Rely on AHRENS-FOX

A new Ahrens-Fox Model H. T.-1000 g.p.m. Twin-Triple Piston Type, Triple Combination Pumper.

AHRENS-FOX FIRE ENGINE CORP., CINCINNATI 12, OHIO

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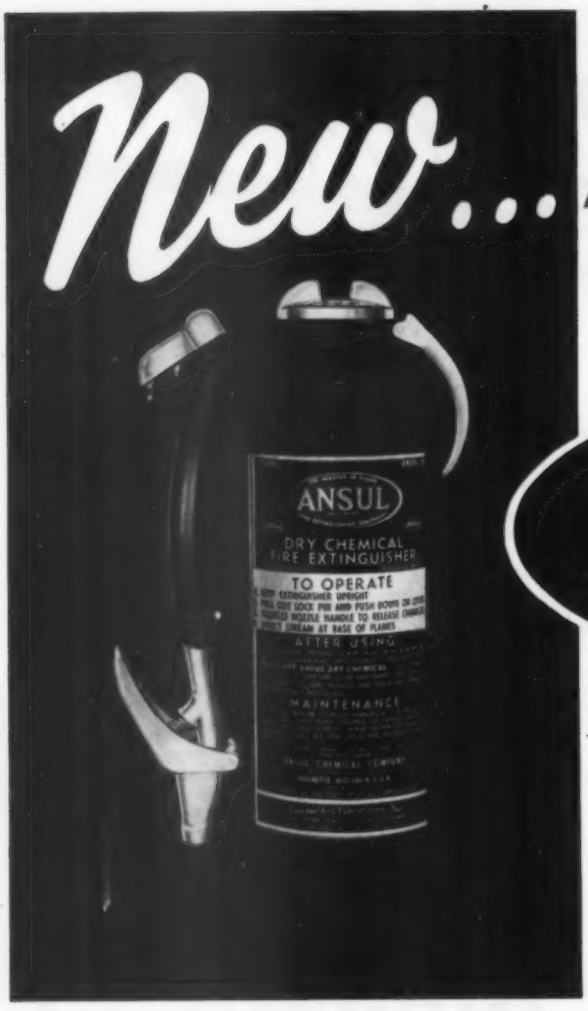

New... FASTER

FIRE STOPPING POWER WITH

THE MASTER OF FLAME

ANSUL*

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FIRE EXTINGUISHING EQUIPMENT

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FIRE EXTINGUISHERS

- Greatly increased fire-killing capacity.
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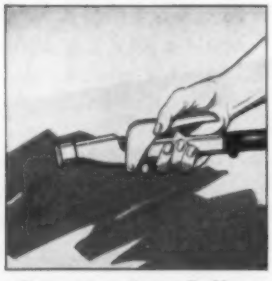
Install the NEW Ansul-Dugas Extinguishers at all hazard spots for greater protection against all fires involving flammable liquids, gases and electrical equipment.

Ready . . . in a Flash!

Simply remove ring-pin and push lever down.



Open nozzle and direct chemical stream at base of flames.

Listed and Approved by Underwriters' Laboratories and Factory Mutual Laboratories

53% More Fire Stopping Power

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Write today for new catalog and authoritative data showing characteristics of all types of approved hand fire extinguishers.

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FORESTVILLE, VA. *Standard FMC Fog Fire Fighter delivered to the Forestville Volunteer Fire Dept., No. 2.*

E. CANTON, OHIO. *Standard FMC Fog Fire Fighter delivered to the Osnaburg Township Fire Dept.*

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... from 850 lbs. pump pressure... with necessary velocity to drive it into the source of the fire. That's what hundreds of fire departments are getting with their FMC High-Pressure Fog Fire Fighters.

They have found greater fire fighting efficiency comes with finer fog—*if* they can get the fog to the heart of the fire, where it is needed. They have also found that FMC high pressure gives them both—fine fog and penetration.

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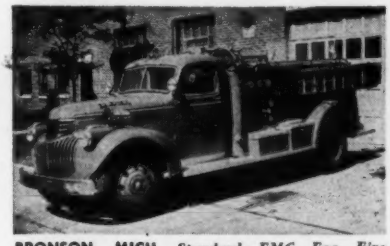
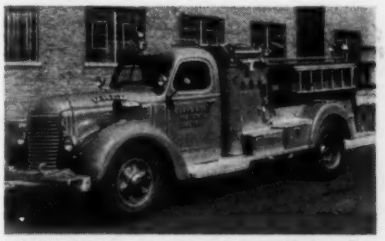
Investigate FMC. For fast attack ... quick quenching ... minimum water, and low water damage.



BRONSON, MICH. *Standard FMC Fog Fire Fighter delivered to the Bronson Community Fire Dept.*



GRAND RIDGE, ILL. *Standard FMC Fog Fire Fighter delivered to the Grand Ridge Volunteer Fire Dept.*

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CUTCHOGUE, L. I., N. Y. *Standard FMC Fog Fire Fighter recently delivered to Cutchogue Fire Department. Carries its own water supply—provides two guns of 30 gallons each at 600 lbs. (or more) nozzle pressure—complete in every respect.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

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FIRE ENGINEERING

NOVEMBER, 1946 VOL. 99. NO. 11

With the Editor

What Price Tournaments? During the last summer one man was killed, one had his leg broken and others suffered lesser injuries in various volunteer firemen's tournaments in New York State alone. What the casualty record was for other states, we do not know at this writing.

These casualties resulted from no real test of ability at fire fighting, nor were they the offshoot of any sort of firemanship training. Rather, they were the result of speed contests between fire companies or other contesting units, specially selected. and in most cases trained for the particular match, using for the most part apparatus and equipment specially stripped-down or "souped up" for the events.

One is constrained to ask just how much do these hopped-up contests really contribute to improved fire fighting methods and techniques. That they sometimes help to finance volunteer fire organizations is no doubt true. There is also the rather dubious advantage of their creating public interest in the volunteer fire service. On the other hand, it is difficult to see just where this hold-over from the days of the old Bully Boys produces anything but ill-feeling and disunity among the contestants, and a misguided belief in the volunteer fireman's abilities on the part of the public.

Although in many states these tournaments and public competitive exhibitions are still is vogue, there is a noticeable and growing tendency to either omit them entirely, or to modify and revise them so as to bring them into line with the trend in out-of-door demonstrations with firemanship instruction.

Many municipal fire departments which formerly encouraged company competition at drill schools, in performing the standard evolutions such as hose stretching, ladder raising and the like, have done away with all competitive efforts. They have found, as has been proved in the case of the competitive volunteer tournament, that racing to break a previously established speed record does not fit a fireman for doing a better, more professional job of fire fighting. Every fire officer knows that such contests do not provide the true measures of company firemanship ability.

It is encouraging to note that not a few volunteer fire departments now decline to participate in tournaments and competitive demonstrations. As one forward-thinking volunteer fire officer expressed it: "It's all very well to win a $10 imitation silver cup because you break some ladder-raising record or other, but it's pretty small compensation for the fellow who broke his leg in the scramble to break that record. It's nice to win a prize for having the tallest or the fattest man in the tournament, or for having the apparatus that traveled the greatest distance to participate, but after all, I'd rather get a note from a taxpayer complimenting our department upon the way we handled his or her fire, than win all the tall trophies put up for a fireman's tournament."

Fred Shepperd

Fire Service Actively Promotes Nation's Fire Prevention Week

Activites Cover Almost Every Phase of Fire Department Promotion

A STAFF REVIEW

WITH national waste by fire in 1946 exceeding that in any year America has ever known before, fire prevention assumes increasing importance. This year, therefore, Fire Prevention Week received the attention of the fire service on a scale greater than ever before. From coast to coast firemen joined with civic, church and business organizations in locally sponsored community-wide efforts to impress the public with the urgency of checking and reversing the tide of destruction.

Publishing limitations do not permit more than this brief high-spotting of the reports on Fire Prevention Week activities received from our correspondents and contributors, but this review may serve to suggest ways and means for our readers to wage future fire prevention campaigns.

Brief Highlights of Fire Prevention Week

In Chicago, fire inspectors under Chief Housing Inspector Dennis E. Duffy invaded South Side neighborhoods to test out the city's new anti-rat ordinance. Residents of the area already have proven themselves co-operative in clearing up building code violations which encourage the presence of rats. Vermin is handmaiden of filth, and both promote fires.

An ordinance requiring that all motion picture theatres within the city limits of St. Louis, Mo., be required to install fire alarm boxes was passed by the city's Board of Alderman. The ordinance requires one box placed in front of the house for theatres whose seating capacity is from 200 to 1500, while those having over 1500 seating capacity must have a second box placed near the stage.

In Connecticut, the 1947 legislature will be asked to appropriate at least $1,000,000 to be used for the elimination of fire hazards at different state institutions. A report based on a survey of state buildings by the New England Rating Bureau points out that the state must soon take steps to eliminate existing fire hazards, especially at the older institutional buildings.

A course in fire prevention was started in October by the Philadelphia Safety Council of the Chamber of Commerce to help citizens of that city reduce fire hazards. Sessions were under the direction of Herbert T. Hecht, field engineer of the Council. The classes dealt with the value of inspection and investigation in a city-wide fire prevention program.

In Newark, N. J., a printer turned in a false fire alarm from the Baker Printing Company but for once the first department failed to take action against the guilty man. The department had asked fire drills during Fire Prevention Week, and the Baker company held one. The printer became over enthusiastic and turned in the real alarm, bringing the full complement of fire fighters, jamming up narrow Clinton street and causing general confusion.

The town of Arlington, Mass., which has since the inception of Fire Prevention Week taken an active part in the yearly program, and which is given credit for originating the practice of inspecting residential cellars for fire hazards, this year continued its house-to-house inspection under the direction of Fire Chief Daniel B. Tierney. Firemen worked on their days off to conduct many of these inspections, by prearrangement with the cooperative householders of the community.

In Cambridge, Mass., home of Harvard University, the Cambridge Fire Department staged an exhibition drill and demonstration of fire fighting equipment on Cambridge Common, Harvard Square. This was preceded by a parade of fire forces from fire headquarters.

In New York City as one detail of Fire Prevention Week, more than 800,000 pupils in the city schools took part in a "simultaneous fire drill" at 10:00 A.M. in the morning. At Washington Irving High School, the 2,500 pupils in the eight-story, block long building were evacuated in four minutes in a drill directed by Commissioner Frank J. Quayle and Acting Chief of Department Frank Murphy. The large scale drills, although successful in demonstrating swift, mass evacuation of municipal schools were considered by some students of fire safety as of less value than individual surprise school drills, conducted under conditions more closely approximating the real thing.

In cooperation with the Pyrene Manufacturing Company, the Newark Safety Council conducted an all-afternoon series of fire extinguishing tests, before a large audience of fire chiefs, safety engineers and insurance executives, during Fire Prevention Week.

Iowa is one of the states that conducted outstanding Fire Prevention Week drives. Lack of space prevents a complete recountal of all the state's many activities, but these were outstanding:

In Clarinda, the local fire whistle sounded the start of the Fire Prevention Week program and its daily 8:00 A.M. signals were publicized to remind householders to clear out fire hazards. Axiom of the local department was, *"We'd rather spend a day preventing fires than an hour fighting them in your home."* Special efforts were made to interest the school children, by giving them rides on the trucks, and having them attend school lectures on fire safety. Good use of the movies was also made, through the running of fire prevention "shorts".

In Webster City, Fire Chief M. M. Wensel advocated thorough inspection of all farm buildings now for fire hazards. Hamilton County, which won the statewide fire prevention contest last year, stressed inspections and this year redoubled its efforts.

In Muscatine, Fire Chief Harold Bierman and his men staged a demonstration of fire department apparatus

Photo Courtesy H. B. Wells

Novel Float Entered in Augusta Fire Prevention Parade by Camp Gordon Fire Department

Photo Courtesy H. B. Wells

Part of the Augusta Fire Department's Fire Prevention Day Parade

and fire extinguishing techniques on the riverfront. Red tapes, across the entranceways of all fire houses remained unbroken for the third day of the Week. Daily parades of fire forces, with public exhibitions of ladder-raising and so on plus school and theatre promotion, maintained public interest.

In Sioux City, Fire Chief Charles B. Kuhl led a staff of speakers to put over the story of fire prevention. The Junior Chamber of Commerce constructed a clock on the marquee of a leading hotel, which showed the cumulative fire losses in the city; at noon each day the department made a run to the hotel at which time the figures were revised.

Waterloo waged a comprehensive campaign during the week, under the direction of Fire Chief Ray Tiller, Mayor Stanley B. Shane, and committees composed of prominent citizens, members of the chamber of commerce and other organizations. The first two days of the drive were devoted to an educational campaign, in which Fire Prevention Week was stressed at church services, in literature distributed to homes and businesses. The next two days were devoted to "cleanup" drives and one day was given over to city-wide inspections, some of the work being done by Boy and Girl Scout organizations. One day was given over to school promotions. Throughout the entire program, the fire department served as the focal point and driving force.

In Independence, emphasis was placed on inspections in business, industrial and school properties. Rural inspections were carried into November, this year's total exceeding the 1542 of last year.

In Knoxville, Friday, September 27 was "Fire Inspection Day" when forty outside inspectors surveyed business sections, under direction of Fire Chief Harry Avery. Fred Brake, of the State Insurance Association, headed the out-of-town inspectors. Firemen and Boy Scouts aided. Other groups toured the residential areas. "Even the churches were in for inspection" said reports.

In Atlantic, city-wide observance of Fire Prevention Week under sponsorship of the Atlantic Fire Department, was preceded by an all-day regional fire school at the city hall. On the staff of instructors were Emmett Cox, Western Actuarial Bureau, Chicago; Harry Corcoran, Iowa Insurance Bureau and Bob Byrus, Iowa State College Extension, Service engineer. The staff aided local fire prevention exponents in their campaign.

Fire Prevention received top consideration in another fire school, this one at Davenport, where instructions were given 191 "Quad-City" and Eastern Iowa firemen by Emmett Cox and others. Demonstrations of fire-fighting equipment were conducted by the local department under direction of Captain Walter Schroeder.

In Marshalltown, local fire department inspectors urged householders to conduct fire drills in their own homes, and maintain constant home inspection to locate and remove fire hazards. "Regular fire drills in the home can be a game," said H. W. Hemphill, fire department inspector.

Other communities in which active Fire Prevention Week drives were undertaken are Keokuk and Burlington, where the Chambers of Commerce cooperated actively with the fire departments; Clinton, Rockwell City, Cresco, Hapton, Alton, Britt and Sioux Center. In these, and other communities, local service clubs, 4-H Club members, civic and other groups all joined with local fire-fighters.

Fire Prevention Week Postscripts

In Columbus, Ohio, "every week is Fire Prevention Week" said Fire Chief E. P. Welch and Captain J. J. Jordan, head of the Fire Prevention Bureau. Last year members of the Bureau made 25,000 inspections, finding about double that number of hazards.

In Durham, N. C., a report submitted to the City Council through the office of the City Manager indicated that "it will require a minimum of half a million dollars to get the fire department in normal balanced working shape." Plans include relocating stations, improvements in fire alarm service; more personnel and new apparatus. "The Durham of tomorrow needs better fire protection" is the catch-phrase in the city's drive for improvements.

In Albany, N. Y., as Mayor Erastus Corning prepared a proclamation for observance of Fire Prevention Week, Albany firemen were busy answering three false alarms within thirteen minutes.

In New York City the Real Estate Board listened to talks by T. Alfred Fleming, National Board of Fire Underwriters, and Deputy Chief John Waldron, New York Fire Department, the theme being better protection of apartment houses, hotels, hospitals and office and loft buildings.

A new tariff of fire rates for Chester, Pa., will be promulgated as a result of a general rerating, principally in the mercantile and garage classes of that city. Many other towns are being surveyed by the Underwriters.

In Chicago, the National Safety Congress, at its meetings stressed fire prevention, saying that smoking in bed has become one of the biggest national fire hazards and tops a list of five principal reasons for the mounting annual loss by fire.

Frank A. Christensen, president, National Board of Fire Underwriters, on the eve of Fire Prevention Week, warned that national waste by fire may run to a billion dollars annually by 1953 if the American people themselves do not check the present rising trend of losses of lives and properties in preventable fires.

Philadelphia conducted a city-wide fire drill in every school and administrative office as part of Fire Prevention Week.

Fire Chief John H. Krusenklaus was general chairman of the Louisville, Kentucky, Fire Prevention Week, which featured cooperative effort with the fire department, fire prevention bureau, schools, churches and civic organizations participating. Members of the Kentucky Fire Prevention Association and Louisville Board of Fire Underwriters also cooperated.

In St. Louis a police squad car,

Removal of "Injured" to Ambulance Demonstrated at Fire Prevention Show at Tarrytown, N. Y.

responding to an alarm of fire, found two boys aged 6 and 8 standing beside the box. "Where's the fire?" inquired Patrolman Henry Wagman.

The lads pointed to a column of smoke faintly visible in the eastern sky, erupting from the third-alarm fire at the Consolidated Forwarding Co. Inc., approximately 25 blocks away.

"The man at the school said we should call the fire department if we see a fire," chirped one of the boys, referring to a fire prevention week talk made to students of Bates School. "And that's a fire".

The Patrolmen couldn't argue with that kind of reasoning so they turned the boys over to their parents, cautioning them to get a little closer to the next blaze they report.

St. Louis Losses Up

Alarmed by soaring fire losses, which are reported 112 per cent above 1945, Fire Chief Frank Egenreither, head of the city's Fire Department, and the St. Louis Safety Council have laid plans for a revival of a plant protection program which was dropped during the war because it would have duplicated in large part the functions of the Office of Civilian Defense.

Chief Egenreither attributes much of the increase to higher losses in industrial fires and blames carelessness and a laxity in housekeeping and the general letdown in plant protection since the end of the war.

The St. Louis program for improved plant protection calls for the formation of volunteer fire brigades in industrial plants, large commercial establishments and other buildings where large numbers of persons are employed or gather. It also provides for the training of brigade members by the Fire Department through lectures and demonstrations on Chief Egenreither's theory that fire losses can be cut by having on the scene trained personnel which can attack fires before the arrival of firemen.

Despite inclement weather, citizens of Augusta, Georgia, lined its streets to witness the city's first fire prevention parade, conducted under auspices of the fire department, Fire Chief D. L. Cliatt in charge, and the Underwriter's Fire Prevention Committee.

Photo Courtesy H. B. Wells

Electrical Fire Hazards Float in the Augusta, Ga., Fire Prevention Day Parade

The use of automotive floats to dramatize the common fire hazards was a feature of the parade, which included units of the fire department, bands, members of the city council public safety commission and junior fire inspectors from local white and colored schools.

Most attractive of the floats was one bearing the sign *"Don't Let This Happen to You"*, showing a miniature house from the windows of which smoke poured, while the figures of firemen played a stream of water on the simulated blaze. In another float to dramatize the follies of smoking in bed, a local fireman played the part of the potential victim and was shown smoking, reclining on a large bed. Another float warned against overloading electrical circuits, and still another showed children seated before an open fireplace containing a simulated fire, with the warning *"Be Careful With Open Fires."* Firemen also served as actors in a number of other floats, to effectively dramatize fire hazards.

Following the parade, city firemen staged a fire-fighting exhibition, using the aerial truck as a water tower. Fire units from Camp Gordon, Oliver General Hospital and the Augusta Arsenal participated in the ceremonies to usher in Fire Prevention Week.

Chicago Strives for Prize

Pointing out that this year's observance of Fire Prevention Week is of particular importance to Chicago because it was just seventy-five years ago, on October 9, that the Great Fire swept the city, and that it was this fire which brought about the observance of Fire Prevention Week, the Chicago Fire Department took the lead in promoting this year's Fire Prevention Week effort.

In cooperation with the Association of Commerce and the Chicago Board of Underwriters, the department, under Chief Marshal Anthony Mullaney, and Comr. M. J. Corrigan, prepared a special series of exhibits, lectures and demonstrations for the Week, focal point of effort being the Commonwealth-Edison Bldg.

Uniformed firemen lectured to all school children in the city between the fourth and eighth grades, following which pupils answered a quiz on fire prevention. There were the usual Fire Prevention poster and essay contests, as Fire Department officials strove to place the city first in the national competition for the most diversified municipal fire prevention program sponsored during the Week. The city won the competition twice, but last year dropped to third place.

Life-Net-Jumping Demonstration at Fire Prevention Ceremonies at Tarrytown, N. Y.

Westchester County Dramatizes Fire Control

Inspired by its recent Firemen's Training Institute program, in which over 200 company fire fighting units and 1,200 firemen participated, many of Westchester County's fire departments high-lighted their Fire Prevention Week programs with full-scale fire-fighting exhibitions and demonstrations, some of them on simulated fires in buildings.

Reporting on these demonstrations, B. Richter Townsend, President of the Fire Chiefs Emergency Plan, said that as in the case of training where firemen were "taught by doing," the best method of educating the public on the seriousness of fire hazards was to show them by actual example, dramatizing

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Trends In Use of Water for Fire Extinguishing

By HUGH N. McNAIR

WHEN we consider the use of water in fire extinguishment, we are going back to the very beginning of the fire fighting art. It was undoubtedly the discovery of the fire extinguishing properties of water that made possible this vast and complex civilization that we now know. Consequently, to follow the trend of its use, we must go back a long, long way, back to the dawn of civilization.

Large Masses of Burning Material Require Large Quantities of Water. Illustrated Is a Big Excelsior Plant at Minneapolis, Minn., Fully Involved by Fire.

Probably few arts are so old and probably fewer still have varied so little in their history. I believe we can safely say that from its very inception right up to the twentieth century, there was only one invariable trend—a trend toward the use of water in greater and greater volume.

Back in the beginning when man found that water would put out fire, he logically enough came to the conclusion that the more water he poured on, the better, and thus established a theory that has been accepted by generation after generation of fire fighters from the Stone to the Atomic Age. This trend was well exemplified during the Nineteenth Century in the names that the volunteer fire companies of that time gave to their apparatus. Names such as "The Deluge", "The Niagara", "The Flood", "The Mississippi", and I believe that one even aspired to the name "Atlantic Ocean", and we find it reflected today in the constantly increasing pumping capacity of our engines and the extensive use of deck guns, ladder pipes and deluge sets.

In contrast, however, with this theory, there has recently appeared another very definite trend that would seem to be in exactly the opposite direction—a trend towards the conservation of water. This trend is manifest in a number of ways but chiefly by the greater use of booster and 1½" lines and by the employment of fog or spray nozzles with low rates of discharge and high extinguishing efficiency.

So divergent are these two trends today, that it would be impossible to go to one town and find a 1946 engine capable of pumping 1500 gallons of water a minute and then in the next town, find a 1946 engine capable of pumping only 80 gallons of water a minute. Each would represent the extreme of a definite trend.

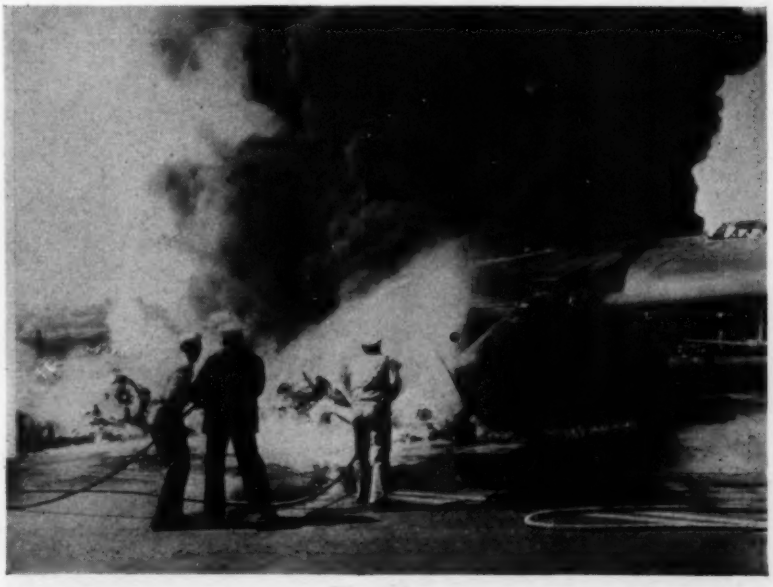
Are these two trends irreconcilably in conflict with each other? Do they represent two schools of thought, one of which must be right and the other must be wrong? Or is there some common ground towards which they will converge to form the pattern of the future? It seems to me that that is the question that we must consider, and I believe it is one of the most pertinent, most challenging and most important questions that faces the fire service today.

It should be interesting, therefore, to devote a little space to the examination of the theories and arguments behind these two trends. Let us examine them with open minds, neither claiming on the one hand that because a practice has been established from time immemorial, it must of necessity be beyond dispute; or on the other, that because a theory is new that that in itself is evidence enough that it is an improvement. Only by sound reasoning and an unbiased analysis of comparative results can a theory or practice be truly evaluated.

We will find as we explore the subject, that there are strong arguments in favor of both theories; arguments that are well supported by factual data.

Advocates of water in volume take the position that the primary function of a fire department is to extinguish a fire as quickly as possible; that it is better under all circumstances to use too much water than too little, and that the danger from a fire getting out of control is such that it more than outweighs the consideration of water damage.

Against these contentions, the propo-



Crash Fire Extinguishing Technique, Employing Water Fog, Was Developed Largely by the Armed Forces Since Pearl Harbor.

nents of water conservation will argue that no good fire chief will ever use a dangerously low volume of water provided there is a sufficient supply available, but that by using small lines and fog nozzles, he will employ the water he does use much more efficiently and consequently, require very much less, with a corresponding reduction in water damage. They will point out that well over 90% of the fires extinguished by fire departments can be classified as small fires, that is, fires in which water damage may at times exceed the actual fire damage by as much as four to one, and that, inasmuch as it is a fire department's duty not only to put out fires but to do so with as little resulting damage as possible. A fire chief should be just as concerned about water damage as he is about fire damage.

They will point out that water fog will, in most instances not only do a quicker, more efficient job with a great deal less water damage, but at the same time afford a high degree of protection to the firemen against both smoke and heat, and be of material assistance in clearing a confined area of smoke and fumes after ventilation has been effected. They will point out that because of the lower volume of water required, smaller lines can be used which can be stretched in much faster and require less manpower to operate. They will stress that in rural areas where water has to be transported or where the supply is limited, the factor of water conservation may spell the difference between a successful stop and a total loss.

To all of this the advocates of the deck gun and the heavy stream will probably reply, "That's fine. Maybe your theory will work on 90% of your fires but what about the other 10% or 6% or 4% or whatever it is. What about those fines that have gotten a goou hold before they're even discovered and are roaring from cellar to roof when the first due company arrives. I'd like to see you or anyone else put out a fire involving the major portion of a large factory or warehouse with small lines and fog nozzles. No matter how efficiently water may be employed, it will absorb just so much heat and no more, and if you have a large volume of fire, you must have a large volume of water, and furthermore, you must have heavy streams that will reach and penetrate into the fire and cover your exposures, from a reasonably safe distance." And so the battle rages between—shall we say, the modernists and the fundamentalists.

A Few Hundred Gallons of Water Efficiently Applied, Could Control This Fire.

A Fault Common to Many Fire Departments—Indiscriminate Use of Heavy Streams, With Resultant Excessive Water Damage.

There is little question that many of the arguments advanced by both sides are beyond dispute, but I believe that the important point is that if we examine them carefully, we will find that there is not as much conflict between them as there appears to be, for the simple reason that under different conditions, each is correct. No experienced fire chief would select small fog lines for his main attack on say a large lumber yard fire; on the other hand, there are probably few fire chiefs left today who would open up a 2½" line on a fire confined to a clothes closet. The question then boils down to one of establishing the line of demarkation. Unfortunately, that line cannot yet be clearly defined. A great deal more experience in the use of fog and spray nozzles must be accumulated.

Fog is only in its infancy, and improvements in both equipment and technique are to be expected. Of great significance is the fact that fog nozzles of larger capacity capable of handling larger fires are coming into more general use. Fires in buildings of considerable size are now being handled very successfully with 2½" fog nozzles of over 100 gpm delivery and even five hundred gpm fog deck guns, ladder pipes and deluge sets are already in service.

This indeed may supply the answer to our questions for here we find a clear indication of the converging of the two trends into a common pattern.

If this is correct, and there is considerable evidence to suggest that it is, then the future trend in the use of water will not be towards either increased volume, or water conservation per se but towards the more scientific and efficient use of water. Water will not be poured on indiscriminately as in the past and to a great extent in the present. Its use will be intelligently and scien-

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Tokyo's GI Fire Fighters

By BOB DOWNER

THE end of the war did not mean the end of the destruction of American army property, for fires have taken lives and equipment of the occupation army in Japan. Many of the fires have been those that started in Japanese civilian homes and got out of control, spreading to American military installations. So much destruction has resulted in this way that in April the army moved a fire-fighting unit to Tokyo and announced that it would fight fires any place in the city, including Japanese civilian homes.

The unit, the 1225th Engineer Fire Fighting Platoon, was stationed in Yokohama before it moved to Tokyo to set up two stations. Plans now are to set up a total of five fire stations in Tokyo, as soon as enough equipment is received from the United States, and to staff each station with a platoon of men. Activities of all the stations will be directed from the Marunouchi Station.

Tokyo's Fire Marshal is 1st Lt. R. W. Shaver of Syracuse, New York, who received the training for his job at the Fort Lewis (Washington) Fire Fighting School for army fire marshals. Executive officer of the 1225th is Clayton Frazee, on military leave from the San Francisco Fire Department. He was with that department for two years as a civilian and has done fire-fighting work for all of his three years in the army.

The Marunouchi Station, in the center of Tokyo, is staffed with thirty Enlisted Men, but the personnel changes alomst daily as men with longest service return to the United States and new men are assigned to the 1225th. The training of inexperienced men is one of the most serious problems encountered. New men are given a thorough course including instruction in the chemistry of fire, use of extinguishers, hose and life-saving equipment, and operation of trucks and pumpers. The men are put through daily drills until they can get a hose into operation in a minute and a half. All men of the platoon, regardless of experience, get two hours drill every day.

The other major problem is that of water pressure, because there are no supplementary pressure stations in the Tokyo water system.

"We have to suck the water out of the mains and build up the pressure ourselves," says Lt. Frazee.

The station has four pumpers, each with a capacity of 500 gallons a minute. Pumpers with a 750-gallon capacity are on order for the station. The trucks are of a design originated at Fort Belvoir, class 530 powered pumpers mounted on a GMC 2½ ton chassis. The trucks have 640 gallon tanks, extinguishers, axes and hose. The pumps are front-mounted.

Each truck carries 1000 feet of 2½-inch hose and 200 feet of 1½-inch. Since Japanese stand pipes and hydrants take a special sized fitting, Lt. Frazee designed adaptors and had them made for the platoon by a Japanese factory. The platoon uses suction hose and ladders obtained from the Japanese fire department.

Japanese fire-fighting equipment is very poor, according to Lt. Shaver, and gutted buildings throughout Tokyo bear witness. All of the Japanese fire department's single-weight linen hose is full of leaks. There are only two aerial trucks in all of Tokyo, and they have

Pumpers of the Marunouchi Station Are Parked in Front of a Totally Burned Out Building. The Area Was Formerly a Japanese Fire Station, But Even With a Fire at Their Backdoor, They Were Unable to Save Anything.

Left: In Front of the American 32nd Military Government Offices in Tokyo, a Squad Goes Through Drill. After These Men Have Completed the Regular Course Given to New Replacements, They Will Be Able to Put a Line into Operation in a Minute and a Half. Right: Trainees of the 1225th Engineer Fire Fighting Platoon in Tokyo Go Through One of Their Daily Drills.

only 85-foot ladders. The fire trucks have no life-saving equipment at all.

Japanese buildings are so flimsily constructed, and fire-fighting equipment is so poor, that the Japanese psychology of fire-fighting is to cover exposures without worrying at all about extinguishing the original blaze.

In small towns there is usually only a hand pump. While someone runs to get that, other citizens form a bucket brigade, drawing water from the irrigation ditches. The water is thrown on the walls of adjoining buildings while the owner of the burning home tries to rescue what he can, since he knows his house cannot be saved. Many blocks of houses are built with common walls. When one house catches fire in such a block, owners of the other homes accept it as the destruction of their homes, too.

While the 1225th Fire Fighting Platoon was in Yokohama, answering only GI calls, it took care of an average of 40 calls a month. "That was winter," Lt. Shaver says, "and most of the fires resulted from faulty oil stoves. The second biggest cause of fires was from short circuits caused by amateur wiring that soldiers put up themselves. In April we're having about 4 calls a week. Through the summer we'll probably average 25 a month, some of them from faulty wiring and some from gasoline vapors."

When the platoon first came to Tokyo, the officers anticipated trouble because of the traffic situation. Since the sidewalks are still covered with debris, most of the pedestrians walk in the streets.

"It hasn't been much of a problem," says one of the drivers. "The pedestrians usualy clear out of the way when they hear us coming, and the Japanese drivers usually give us the right of way. The only trouble we have is that some of the American drivers won't give us the right of way once in awhile."

That the fire situation in Japan is dangerous is shown by the fact that in January, an average of two fires a day were serious enough to be recorded in official intelligence reports. But, with units such as the 1225th Engineer Fire Fighting Platoon, and with good equipment, fires cannot hamper a successful occupation program in Japan.

Two Japanese Boys Watch As Lt. Clayton Frazee Shows Trainees How to Open a Valve. One Difficulty That the GI Fire Fighters Have Is That Valves on All of Tokyo's Large Mains Are Kept Locked and Cannot Be Opened Without Having An Interpreter Call a Japanese Official of the Water Department, So the Department Must Use 8-Inch Mains

BELL, BOX AND BUFF CLUBS CONTINUE TO GROW IN NUMBER

Fire Bell Club of New York City Given Fire Line Badges; Roster of Buff Clubs

By Jerry Daly

THE Fire Bell Club of New York, an organization of 75 men seriously and enthusiastically interested in the welfare of the New York Fire Department, has been granted by Fire Commissioner Frank J. Quayle, the use of a distinctive badge for admittance through fire lines. The Police Commissioner has issued a general order (No. 42) to all commands, directing that the holders of Bell Club badges be admitted through fire lines but not to buildings. The order to the police force contains a photograph of the badge. It is a sun burst design, topped off with the letters "F. B. C.", with the City coat of arms in the center surrounded with a ribbon —"Fire Department City of New York."

It is the first time in the history of New York City that a fire buff's club or association has been so recognized. Commissioner Quayle, a progressive and successful business executive for many years, told Mayor William O'Dwyer that the members of the Bell Club are a representative group of mature men engaged in a variety of professions and industries; that they have no known political affiliations or ambitions; that their sole interest is only that which is good for the N. Y. F. D.; that all, excepting 18 who were with the colors, had served continuously and conscientiously in the F. D. E. A. C. during the entire period of the war, mostly as auxiliary fire alarm dispatchers and a few as auxiliary fire fighters. Mayor O'Dwyer approved.

Commissioner Quayle imposed the following conditions: that each member of the Bell Club who avails himself of the badge privilege, shall sign a waiver releasing the City from liability; that he shall agree in writing that possession of the badge is a courtesy and not a right; that the badge shall be owned by the Bell Club and not by the member; that the member, for cause, shall surrender the badge upon demand and that the membership be restricted to 75. All agreed.

With the exception of the F. D. E. A. C. identification cards and arm brassards which were used during the war, special gold badges for members of the Bell Club are the first fire line credentials authorized in New York since the declaration of war in December 1941. The subject of fire line credentials in New York has been a troublesome one for many years to the Fire and Police Commissioners.

Recently this reporter canvassed the fire fans associations of the country in an effort to get a cross-section of the pastime. Eighteen known clubs were sent a questionnaire. Only five failed to reply—if indeed they ever received the questionnaire. Undoubtedly there are others as yet not identified outside of their own domain. If a box or buff's club or association is not included here, a responsible officer of the group is requested to send a brief history of his organization to this reporter at 840 Grand Concourse, New York 51.

The war put a kink in the activities

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How to Get Best Performance From Motor Fire Apparatus

Basis of Good Service is Sound Instruction of the Men Who are to Operate It

By HARRY M. IRWIN*

IT has often been said that great battles are fought and won before they actually happen—by adequate preparation and planning, and by drilling for them in advance. By the same token it is true that fires are fought successfully before thy actually start—by preparing for them in advance by means of a program of planned indoor and outdoor drills.

Preparation and Planning

DRILLS: One of the most important requirements for sucessful operation is that your apparatus should not fail you at a time when you need it most. Adequate preventative maintenance, including systematic and regular inspection as well as testing, is one method of insuring that your apparatus will give a reliable performance at a fire. A program of preventative maintenance should include a thorough study of the make-up of the apparatus and the part each unit plays in its complete operation. It should also include regular inspection and servicing to prevent minor defects developing which may later become major defects and render an apparatus inoperative while responding to or operating at a fire. Officers conducting such drills should avail themselves of manufacturers' manuals as well as other source books on the subject.

A good drill is one that is planned in advance. The subject of the drill should be outlined and covered step by step in its logical order, so as to make sure each phase of the topic is given thorough treatment. One way of making sure that each topic of a drill is covered is to have the officer sit down before the drill and outline it, including the methods he is going to use in instructing the members. Incidentally, an extensive plan, similar to this, has recently been undertaken by our department. To this end a Manual of Instruction is being prepared for the guidance of company officers in conducting their drills. The subject matter of the manual is the course of instruction formerly given at the Motor and Pump Operators School. Under the former set-up, only a limited number of men could be spared from their duties to attend classes. Under the contemplated plan of instruction, the course would be given in company quarters at regular drill time. The entire material in the manual is broken down into a series of drills, and presented in detailed form for the guidance of the company officer.

Drills should be conducted indoors as well as outdoors, with the accent on the practical application wherever possible. Of course, the scientific end of fire operations is also very important, particularly in the field of hydraulics. Indoor drills are in the main hypothetical as far as actual operations are concerned; but they are extremely practical insofar as they pertain to the apparatus and equipment. At indoor drills, situations where long or complex stretches would have to be made, could be discussed and solved through the application of practical hydraulics. I have found that a common misunderstanding among pump operators is the relationship between changes in nozzle and engine pressures. A study of the subject of practical hydraulics in quarters will show that where changes in nozzle pressures are desired, the engine pressure need only be changed proportionately. For example: An officer, directing a stream at a fire observes that the stream reaches only half way to the objective. Let us suppose, further, that the pressure on the nozzle is 30 lbs. and the throw, therefore, approximately 30 feet, with 100 lbs. on the pumper. It is common belief that in this situation an increase of 30 lbs. to the engine pressure would mean an increase of 30 lbs. on the nozzle, but this is not true. Actually, in order to double the nozzle pressure we must double the engine pressure. In this case, therefore, in order to add another 30 lbs. to the nozzle (or to double it) we must double the engine pressure or increase it to 200 lbs. In brief, to add 30 lbs. to the nozzle we would have to add 100 lbs. to the engine pressure.

Theoretical Instruction Tested in Outdoor Drills

Theoretical instruction on the subject of practical hydraulics should be given during the drills conducted indoors; but when the opportunity presents itself, in outdoor drills these theories should actually be put into practice and tested. You may find that when worked out on the blackboard in quarters the engine pressure amounted to so much. Check your figures in outdoor drills, by actually hooking up the pumper and noting the readings on the engine pressure gauges. Vary the hose layouts, substitute different size nozzles and see what happens to the motor speed, engine pressure and nozzle pressures.

Another common fault we have found in visiting companies, is that a great many officers and pump operators are somewhat unfamiliar with the fact that when drafting water by exhausting air from a suction line, the amount of water you can discharge depends not only on the pumper but on the height of the apparatus above the level of the source of supply. A study of the Fire Underwriter's charts on this subject will show that for each extra 100 gals. you try to discharge, your maximum lift drops about two or three feet. For this reason, when drafting from rivers, the tide must

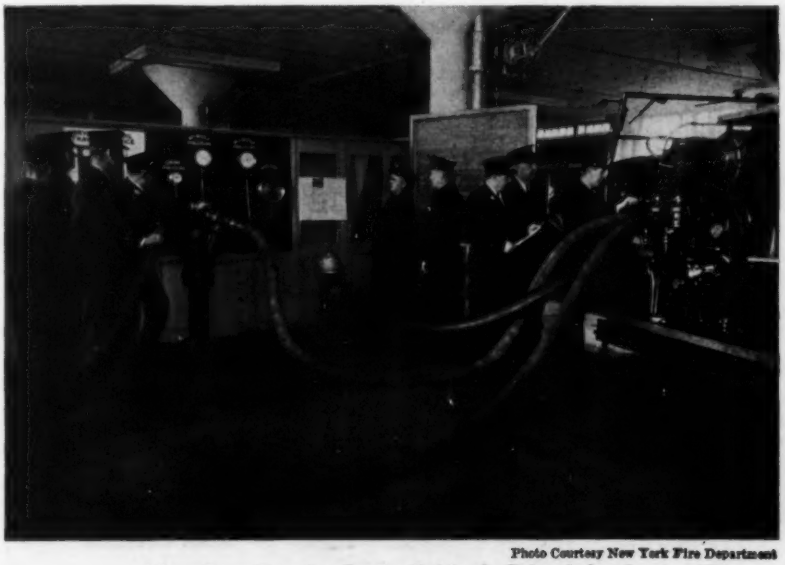


Photo Courtesy New York Fire Department

Motor Pump Operators Receive Training-by-Doing, Indoors!

Feature of the New York Fire Department's Fire College is the Motor and Pump Operators' School. Here learning by doing is carried on indoors by a special layout for drafting water developed by Acting Battalion Chief Harry Irwin, Supervising Engineer, N. Y. F. D.

*Acting Chief of Battalion and Supervising Engineer, New York Fire Department. Excerpts of paper presented before the Training Institute of the Westchester County (N. Y.) Emergency Plan, Sept. 12, 1946.

be watched continually, and when operating under other conditions the level of the source of supply must be observed, so that you do not try to overtax your pumper by exceeding the maximum lift. For example, you may be hooked up and successfully drafting water. Let us suppose you are discharging 500 gals. per minute at or near its maximum lift, through two hand lines. Later on additional hand lines are connected to the pumper and discharge gates opened. Immediately there is trouble, because the pumper cannot discharge that amount of water at that lift.

Under the same heading I might suggest that friction loss charts be made up which would cover the usual stretches encountered. Based on these, the pump operator could easily determine his correct engine pressure. Rule of thumb methods should be worked out to meet changing conditions where the usual friction losses do not apply.

Relay Pumping

To avoid confusion and inefficiency when called on to relay water, you should standardize the operation in your indoor drills. A plan could be worked out whereby you could locate each pumper in the relay according to the maximum pressure at which the hose is tested and the friction loss per length at the usual discharge. For example, if the hose is tested to withstand a maximum pressure of 200 lbs. and the friction loss per length is 10 lbs., you could stretch 18 lengths of hose between all pumpers used in the relay, and at no point in the stretch would you exceed the safe operating pressure on the hose. The remaining 20 lbs. would be for residual pressure at the next pumper.

Another point which could be covered in indoor drills is laying out routes of travel to the different locations, according to the distance, topographical features and the chances of meeting other apparatus responding to the same alarm.

Since indoor drills are in great part confined to discussion, I wish to add one important point here. You will find that the most successful drill is one in which *all* members participate. Don't let it wind up in a discussion between two or three individuals on some particular point. Encourage every man present to express his opinion and work out his own ideas even though at the time they may not appear very sound. Above all, don't belittle any man's knowledge of the topic. Respect his viewpoint but, at the same time, make your own clear. Remember that demonstration and member participation make learning easy; so encourage them whereever possible. If you do, you will find, I am sure, that it is less of a task for the officer to give the drill, the members are more interested and more benefit will be derived from the drill.

Teaching Methods

Some time ago, I had occasion to witness an interesting demonstration by the State Department of Education. They were showing the relative value of three different methods of teaching. In this particular case they were instructing individuals as to how to tie a certain knot in a rope. The first method was by lecture alone, the second by lecture and demonstration and the third by having the individual actually make the knot himself as the instructor stood in front of him and showed him. Six men were summoned at random to the platform and each pair instructed by a different method. The first pair had their backs to the instructor while he decribed how to make the knot. They were then given the rope and told to make the knot. Of course, they made very little progress. The second pair then faced the instructor while he went through the motions of making the knot as he described it. Then, they were given the rope. Although they made more progress than the first pair, results were still not satisfactory. The third pair were then given lengths of rope and actually went through each step of tying the kot as the instructor described it and himself demonstrated it. At the end of the instruction they were told to tie the knot without any help. Of course, they did it with ease.

I mention this incident only to stress the fact that there is no better way of mastering any evolution than by getting out and actually trying to do it. If mistakes are made, repeat the effort. Try it again and again until you achieve perfection. It is far better to make mistakes in practice than at a fire or other emergency where your life of someone else's may depend on it.

"Learn by doing" is a motto that could well be adopted by you in all your instruction. You can talk until doomsday about the correct way to carry a ladder but there is no better way for a man to learn to carry it than to pick it up and make an effort to carry it. Again, it is useless to merely talk about such things as nozzle reactions or kickback at the nozzle as the line is opened. The time to teach the handling of a line is in outdoor drill and not when a man finds himself pinned into such a position that he is helpless to move the line or himself at a fire.

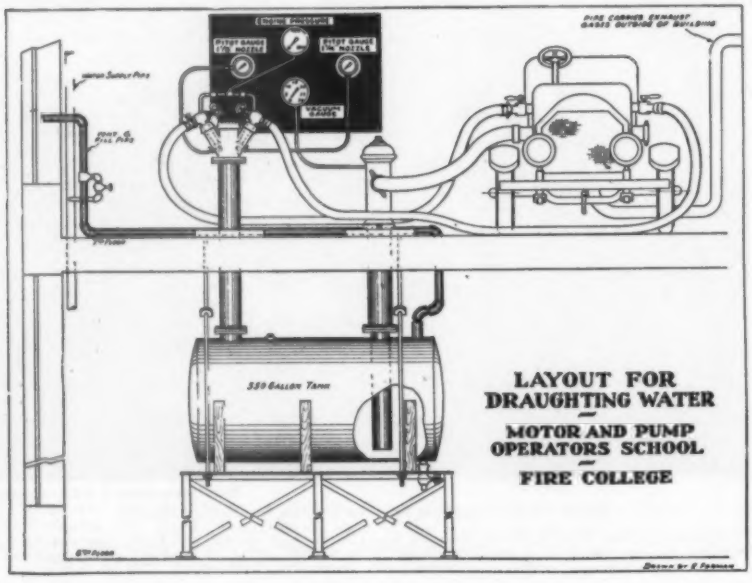
WET DRILLS: So, whenever you can, use water in drill sessions. Test these theories you have worked out to see if they apply in actual practice. We know that if two lines are used instead of one, the friction loss drops to about ¼ of what it was. Hook up a single line at first, and then run in another line of equal size and length. Note the required engine pressures under each setup, in order to give you the same nozzle pressure in each case. In this way the saving in pressure by siamesing the line will be very clearly demonstrated.

Pump Operations

When treating such topics as hand churn valves, relief valves and other fire pump accessories, there is no better way of doing it than by putting pressure on the pumper and using them. For instance, when talking about the purpose and operation of churn valves, a good way of teaching it would be to reach a certain pump pressure and note the motor speed. Then partly open the churn valve and note the drop in pressure. Next, raise the throttle until the former pressure is again reached, and note the new motor speed. On one type of pumper we have found that to run with the churn valve opened one full turn meant racing the motor at twice its necessary speed.

In the same way you could show how relief valves work. Set them at a certain figure and then raise the throttle, show how the engine pressure goes up slightly and then settles back to the point for which the relief valve was set. In this way the importance of properly setting these valves will be shown in a concrete manner. As you are well aware, relief valves should not operate continuously, but only when the line is shut down. Water, continuously passing through an open relief valve, has a tendency to wash out the leather washers inside the valve itself.

Another point on which there is a great deal of misunderstanding relates to the best position or stage of the fire pumps in which to operate. The answer, in brief, is this: The best position is that in which the required discharge is given at the least possible motor speed and effort. If the small pump on the piston type or the low gear on the rotary type are used, when required discharges are high, excessive motor speed would be necessary to meet these demands. On the other hand, if a larger pump or higher gear were used, and the required discharges were low, excessive back pressure would result in laboring of the motor or possible stalling, unless



the excess water were by-passed through the churn or relief valve, which is not good practice and results in unnecessary motor speed. With a centrifugal pump the situation is slightly different. The possibility of the motor laboring or stalling due to back pressure is eliminated. Here we are concerned mostly with conservation of motor speed. On centrifugal pumps which are provided with multi-stage arrangement, the most efficient position of the stage arrangement is that which gives the desired pump pressure and discharge at the lowest motor speed. This is especially true when working from a hydrant with good pressure on it, as full advantage is taken of the hydrant pressure by the pumper. Some of our own experiments have shown that where large volumes of discharge are not required, motor speed could be cut in half and pump pressure and discharge remain the same, merely by operating the stage valve.

Indoors you have worked out solutions for various relay stretches, based on rule of thumb methods. Outdoors you have a chance to see if they actually work, by putting them into practice. The matter of raising and placing of all types of ladders is one which could best be covered outdoors. Men should be given a chance to raise ladders to different heights and at various angles in order to acquire skill in handling them.

DRIVING: A final topic to be covered in outdoor drill is that of driving instruction. Each man who may have to drive the apparatus should be given a chance to drive it in drill. Such practice builds up confidence, results in better control, less chances of being taken and consequently less accidents.

Operations at Fires

The second part of this article I should like to devote to the subject of operations at fires. Getting the most out of your pumper can be discussed in two phases:

1. Operations at a hydrant.
2. Drafting operations.

A great deal of what is said applies to either operation.

When operating from a hydrant, consideration should be given to the selection of a hydrant whose supply will meet the pumper's capacity rating. If there is a choice, it is far better to stretch a few extra lengths from a hydrant with good water supply than to pick one nearer to the fire and find later on, when additional pumpers in the vicinity start operating and pressure drops, the water supply is inadequate. It is also recommended that large size connections be used where practicable and where time is not a vital factor. Hydrants should always be tested before hooking up, and operating valves fully opened in all cases after connecting pumper, regardless of the amount of water required.

After connecting to the hydrant, the pressure on the hydrant should be noted. This will serve as a guide to the operator in selecting the proper pump position. For example, a pump operator of a centrifugal pump may note that pressure on the hydrant is poor. In order to discharge maximum amounts of water he must operate in the volume position and at considerable motor speed. However, if pressure on the hydrant is good, he may discharge near capacity in a series-parallel position at, of course, a considerable saving in motor and pump speed.

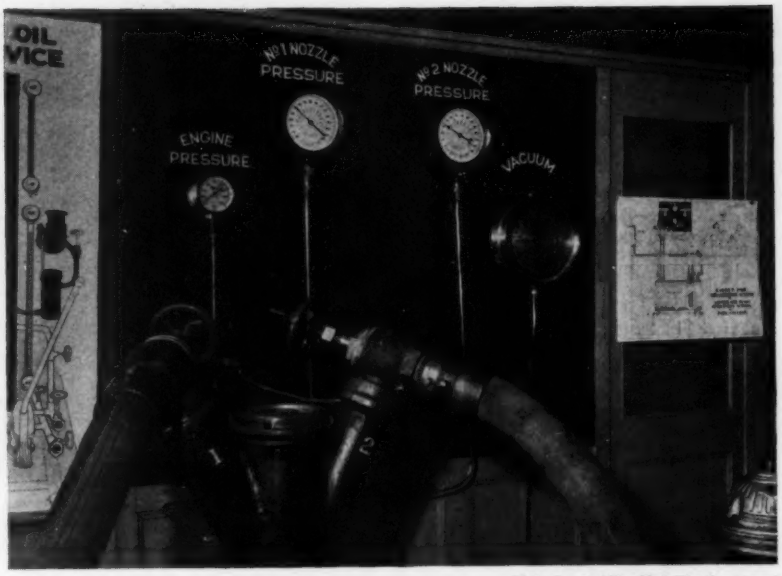


Photo Courtesy New York Fire Department

N. Y. F. D. Motor Pump Operators Learn by Doing

Close-up of panel board with gauges, and nozzle stanchion used in Motor Pump Operators' School's unique indoor drafting hookup. As will be noted by comparing this photograph with schematic outline of the set-up, the two short lengths of 3-inch hose, representing two hose lines (one with 1¼ and the other with 1¼-inch nozzles), lead from pumper to connections on the stanchion. This is fitted with a glass section through which water may be viewed as it discharges. By manipulating Globe check valves on each line the instructor can enlarge or reduce the size openings through which water must pass to reach the nozzle and so build up or cut down pressure in the lines. Gauges register engine pressure and vacuum, and nozzle pressure at both nozzles.

After arriving at desired operating pressures, relief valves and governors should be properly set to handle any increase in pressure in the event a line should suddenly be shut down. Governors are installed in order to control pump speed through the control of motor speed. They keep pressure constant within the pump and it is important that they be used at all times.

COOLING SYSTEMS: Where relief valves are in proper operating order, hand churns should be kept fully seated, eliminating loss of pressure and unnecessary motor speed.

The control of motor temperatures plays a large part in the efficient operation of pumpers at fires. On fire apparatus, as a rule, there are two types of motor cooling systems. One is the same as on your own car, in which water, cooled in the radiator cores by the inrushing air due to the motion of the car and the turning of the fan, is circulated in the motor block and then returns to the radiator. But pumping engines, when engaged in operations, are deprived of this inrushing air and for this reason auxiliary means of cooling the motor must be provided.

Auxiliary cooling systems are usually direct or indirect, or a combination of both. In the direct system, water from the fire pump is fed directly to the motor circulating system, and relieves out the overflow or exhaust pipe. In the indirect, water is fed from the fire pump into a cooling coil and returns to the fire pump without entering the motor circulating system. Another method employed is to have the water from the circulating system pass into a coil inserted in the fire pump and be cooled therein. It then returns to the radiator where is is further cooled.

It is a fact that motors operate most efficiently at temperature ranges of 160 to 180 degrees. Auxiliary cooling systems should not be used until that figure is exceeded.

LUBRICATION: Lubrication plays a most important part in the operation of fire apparatus. It is being penny wise and pound foolish to use a cheap grade of lubricant on your apparatus. If you expect to get the best out of it, you must also put the best into it. Cheap lubricants tend to break down under stress of hard work, causing bearings to burn out and motors to "seize." Contrary to common belief, the reading on the oil pressure gauge is no indication of the amount of oil in the crankcase. The only true indication of the amount of oil in the crankcase is shown on the measuring stick or bayonet. It is good policy to take readings on the stick at frequent intervals. Where an unusual drop in pressure is noticed on the oil pressure gauge it might mean that, due to abnormally high motor temperatures, oil has thinned out. In such cases the motor temperature should be lowered by the use of auxiliary cooling systems or other means, and more oil added to lend body to the thinned out oil, even though bayonet gauge shows sufficient quantity in crankcase. On long pumping jobs, bearings which may be lubricated manually, should receive attention.

Now the final phase of this article is successful operation at draft. Prior to drafting operations, the priming pump, fire pump impellers and bearings should be lubricated manually where provision is made for it. Such lubrication prevents damage to the working parts and tends to seal the pumps, thereby aiding in the displacement of air. In drafting operations, the first step is to place the pumper on stable ground as close to the source of water as possible. With pumps which obtain their water by vacuum, only hard suction connections should be used, and they should be made spanner

(*Continued on page* 840)

Rockland Emergency Unit Covers Much Ground

The Rockland Emergency Unit, pride and joy of Rockland H. & L. Co. and volunteer fire fighters of Spring Valley, N. Y., and vicinity, recently got the press headlines when it made its third trip into the Ramapo Mountains and for the second time within a month, brought out of his cabin, located on a rock-strewn trail, Alfred Pitt, who was suffering from a broken leg. Previously they had rendered first aid to Mr. Pitt, whose housekeeper and caretaker, proved suspicious of all "first aiders."

Members of the emergency crew treked up the rock trail to the cabin from the home of William McKinney, the nearest neighbor. They experienced some difficulty in convincing the suspicious housekeeper that the patient must be removed but she was finally won over and Pitt, whose ankle was swolien to twice its normal size and badly twisted, was placed on a stretcher and finally removed to Good Samaritan Hospital in Suffern, N. Y.

As may be drawn from the illustration, the Rockland Emergency truck is one of the most modern and best equipped such units. It is manned by a smart, well trained crew of volunteer firemen.

Not only does the unit make emergency calls, but owing to the in-between location of Spring Valley, between the two major hospitals in Rockland County, neither of which will render ambulance service to the Village, the emergency squad members transport many seriously ill persons, needing care.

This truck and its company unit play an important part in the disaster control plans of the area.

Rockland Emergency Squad Truck Ready for Business

Little can be required in the way of first aid and rescue equipment that is not found on the up-to-the-minute truck of Rockland H. & L. Co., Spring Valley, N. Y.

New York Plans Many Improvements

Drastic changes in the physical properties of the New York Fire Department, involving reshuffling of some 118 companies, purchase of thirty-five new sites and erection on them of new structures at an estimated cost of $6,000,000 has been requested of Mayor William O'Dwyer by Fire Commissioner Frank J. Quayle.

Part of this fund would be reclaimed by the city by the immediate sale of twelve buildings and sites now occupied by the fire companies. In addition, the Commissioner suggests the retirement of four of the department's oldest fire boats, ranging in age from forty to forty-eight years, and their replacement by lighter vessels, such as those used in Chicago.

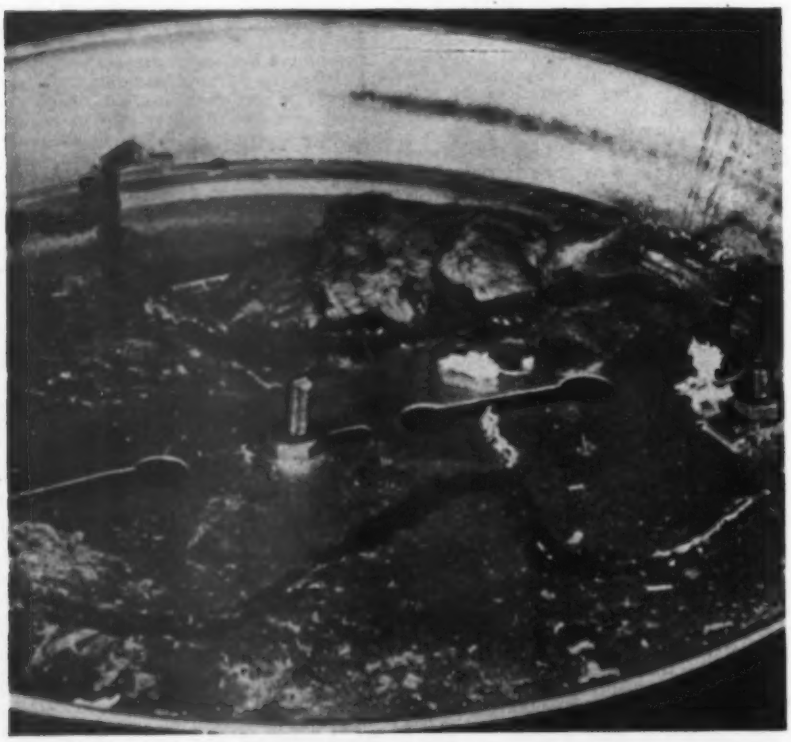
The report further indicates that twenty-five per cent of the present fire apparatus of the department should be replaced, with much of the replaced equipment reconditioned and held in reserve. This would provide for twenty reserve companies in Manhattaan and the Bronx, twenty-four in Brooklyn and Queens and three in Richmond.

The program contemplates disbandment of the North Shore Hook and Ladder Company No. 1 and Richmond Engine Company No. 1, both on Staten Island, and the last volunteer units still responding to fires in the city. They would be replaced by city apparatus.

Other recommendations include the discontinuance of the practice of assigning firemen to theatres, with the stipulation that city legislation be enacted to require owners to employ their own fire guards, which move would return 110 city firemen to active duty and effect a saving of $385,000 in department payroll expenses; the establishment of night headquarters of the Chief of Department in mid-town Manhattan instead of the present headquarters at 42 Great Jones street; the elimination of obsolete minor equipment and the standardization of equipment on engine and ladder companies and the immediate return of the three platoon system.

The study is reported to have been conducted by top Fire Department heads with the cooperation of members of the National Board of Fire Underwriters.

According to data released to FIRE ENGINEERING, the following Engine Companies will be disbanded under the new program: 4 now located at 119 Maiden Lane; 19, at 355 W. 25th; 20, at 243 Lafayette St.; 25, at 342 E. 5th; 29, at 160 Chambers St.; 76, (2nd Section) at 105 W. 102nd; 91, (2nd Section) at 242 E. 111th; all in Manhattan. Also, Engines 251, now at 1624 Harper St., and 283, (2nd Section) at 214 Briston St., both in Brooklyn, and Ladder 26 (2nd Section) at 52 E. 114th St. Manhattan.



Trapped in the Act

When trouble developed in an electric circuit at a farm near Bennington, Vt., an investigation showed conclusively the cause—a rat. The young rodent got into a large fixture canopy, and proceeded to gnaw the insulation off one of the wires. When his teeth reached the live wire, the current passed through his body to the metal canopy. His teeth were still in contact with the wire when his carcass was discovered. The photograph above, sent us by Chief Alfred Koltonski of Rutland, Vt., shows the scene of the tragedy, and the victim with his teeth still planted in the wire.

At New Liskeard, Ont., Are, Left to Right, Chief T. H. Whitman, Noranda Mines, Que., President of the Temiskaming Firemen's Association; Jack Hunt, Timmins, Ont., President of Cochrane District Firemen's Association; and Chief Angus Mickie, Lachine, Que., President of the Dominion Association of Fire Chiefs

These changes will release six captains, twenty-four lieutenants and 211 firemen for duty elsewhere. It will also permit the disposal of five buildings.

At the same time it is proposed to relocate the following: Engine 13, now at 99 Wooster St., Manhattan, to be with Ladder 20, 155 Mercer St., that Borough; Engine 58 at 81 W. 115th St. with Ladder 26, 52, E. 114th St., Manhattan; Engine 60, 352 E. 137th St., Bronx, with Ladder 17, 341 E. 143rd St., Bronx; Rescue 3, now at 341 E. 143rd, Bronx with Engine 42, 1781 Monroe Ave., Bronx; Engine 27, 979 Herkimer St., Brooklyn, with Ladder 123, 432 Ralph Ave., Brooklyn; Ladder 9, 209 Elizabeth, Manhattan, with Engine 33, 42 Great Jones St., Manhattan; Ladder 49, 1079 Nelson Ave., Bronx, with Engine 68, 1080 Ogden Ave., Bronx; and Ladder 116, 3813 Northern Blvd., Queens, with Engine 261, 3720 29th St., Long Island City.

These relocations, it is said, will release seven more buildings for disposal, or a total of twelve structures. Approximately sixty-five fire houses are to be abandoned and the companies located in an estimated thirty-five new houses.

Threatening Garage Fire Checked

Quick mobilization of Philadelphia, Pa., fire fighting forces, summoned on three alarms, prevented fire from communicating to costly and hazardous exposures adjoining the David T. Robinson automobile agency, Chestnut and 48th street.

The fire, which originated in store room containing $200,000 worth of spare parts, new tires and 1000 gallons of anti-freeze fluid, ruined five new automobiles and fourteen other cars and trucks but was prevented from reaching the plant of a book publisher next door, and a 3,000,000 cubic feet storage tank of the Philadelphia Gas Works Co. in the rear. It was largely because of the exposures that the three alarms were transmitted.

Fifty employes of eth agency fled uninjured. One fireman, Acting Battalion Chief John Pusey, suffered cuts.

The fire started about 11:45 A.M. in the two-story storeroom section of the building, which dropped to one story in height in the front and rear. Fed by the anti-free fluid, the fire spread rapidly. At the onset employes used hand extinguishers to control the fire but to no avail and a telephone alarm was sent to the fire department, while other employes attempted to remove cars from the danger area. A number were saved.

The second alarm was transmitted at 11:49 and the third at 11:57 and firemen had the blaze under control in less than an hour. The loss is estimated at $150,000.

Canadian Associations Hold Joint Meeting

The District of Cochrane Firemen's Association and the Temiskaming Firemen's Association both of Canada held a joint session on September 16 and 17 at New Liskeard. The officers elected for 1946-7 are: District of Cochrane Association: President, J. Hunt of Timmins; Vice-President, J. Gagne, Ansonville, Secretary-Treasurer (pro tem) Melville Ralph, Timmins. Temiskaming Association: President, T. H. Whitman, of Noranda Mine, Noranda; Vice-President, J. R. Miller, South Porcupine, and Secretary-Treasurer F. E. Thompson, New Liskeard. WM. J. SCOTT

Chief Dies at Fire

Two Westminster College students have been charged by Prosecuting Attorney Hugh Williamson with setting a fire which destroyed the Beta Theta Pi fraternity house at Fulton, Mo., and seriously injured two of the fraternity members.

During the course of the fire the eighty-year-old Fulton fire chief Grant Duncan, suffered a heart attack and died.

According to Mr. Williamson, a twenty-two-year-old sophomore from Ironton, Mo., signed a statement admitting starting the blaze and implicating another student from Granite City, Ill. The two youths are being held in default of $10,000 bonds on charges of arson.

Of the thirty-five students asleep in the house at the time of the fire, only two were injured.

Firemen Stretch Lines Over Roof to Fight Smoky Philadelphia Garage Fire

Manufacturers' Announcements

R. F. Wiltse Advanced

Robert F. Wiltse has been appointed Western Sales Manager for Ward LaFrance Truck Division, Great American Industries, Inc., Elmira, N. Y. This

R. F. Wiltse

announcement has been made by Wendell P. Rice, General Sales Manager. Wiltse has been serving in the capacity of Regional Manager for the Division, and his headquarters will be in Saginaw, Michigan.

Mr. Wiltse came to Ward LaFrance after six years with Timken-Detroit Axle, and prior to that he was with American Telephone and Telegraph.

Lansing Adds Novel Squad Truck

A novel squad truck was recently delivered to the Lansing, Mich., Fire Department by the John Bean Mfg. Co. Delivery of the truck resulted in the organization of Squad No. 1. This unit will be manned by a specially trained crew and will respond to all alarms. It was built to specifications set up by Chief Hugh Fisher, of Lansing.

Equipment of the squad truck includes the following: Two-way radio; 430 gallon water tank; 60 G. P. M. Bean high pressure pump at 850 pounds operating pressure, 650 pounds gun pressure; V-belt drive to pump; two 250-ft. lengths of ¾-inch high pressure hose on each reel; two F. M. C. special high pressure fire guns; two sets of ladders; one 200-watt generator with lights and other accessories.

The chassis carries a mechanical siren and an electrical siren. It has red and green blinker warning lights as well as an oscillating "wig-wag" type light on cab roof. Siren on fender also has blinker lights and blinker light on rear of truck. Everything has been done in this respect to produce a unit with the greatest possible running protection.

It is intended to give fast attack, cut water losses to a minimum and eliminate considerable of the labor used in laying 2½-inch hose from pumpers.

In the near future, two more duplicate units will be placed in service in outlying districts.

Waterous Company Honored

Fred A. Waterous, President of the Waterous Company, St. Paul, Minnesota, was recently honored by receipt of the Brand Names Foundation's

Certificate of Public Service Awarded Waterous

"Certificate of Public Service" at a testimonial dinner attended by business and industrial leaders and newspaper, magazine, radio, and advertising executives. Only brand names which have been in continuous use for 50 years or more qualify for the award.

Mr. Buckingham, the speaker for Brand Names Foundation, warned the award winners that they must fight to preserve the brand name system and its service to America. He told them that if the advocates of grade labeling by the government won out we no longer would be a nation of free people.

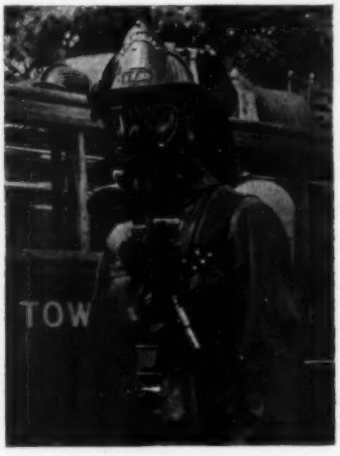
"Nothing more completely epitomizes the aspirations and achievements of the individuals of a nation than the brand name," he said. "The brand name system symbolizes competition and out of competition comes progress. This ceaseless bidding for public favor has yielded constant improvement, constant raising of our standard of living. Brand identification is an expression of the manufacturer's responsibility to the consumer."

Peterson Named Plant Manager

Announcement of the appointment of Helmer Peterson as Factory Manager of Mack-International Motor Truck Corporation's Long Island City, N. Y., plans has been made by A. N. Norton, Vice President. In his new capacity Mr. Peterson will oversee the manufacture of Mack fire apparatus, as well as the fabrication of replacement parts for obsolete models of the entire Mack line.

Scott Air-Pak Approved

The Scott Air-Pak, a new type of self-contained breathing apparatus, designed and manufactured by the Scott Aviation Corporation of Lancaster,



Scott Air-Pak Breathing Apparatus

New York, has just been granted Approval No. 1308 by the Bureau of Mines.

It has been widely accepted by municipal fire departments for both rescue equipment and for firemen or other persons to safely enter a smoke filled area or an area with air contaminated by ammonia or other dangerous fumes.

It has found further use as underwater breathing equipment for marine rescue, salvage, or repair work.

The placing of the stamp of approval on this equipment by the Bureau of Mines will now allow its use in mines and will also widen its use in the industrial, municipal and marine fields.

Further information may be had by writing to Safety Equipment Division, Scott Aviation Corporation, Lancaster, New York.

(*Continued on page* 856)

New Squad Truck Recently Added to the Lansing, Mich., Fire Department

Short Cuts and Gadgets

INDICATING WATER SUPPLIES

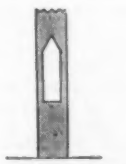
Evidently we haven't exhausted the font of ideas on the subject of indicating hydrants, and other sources of water. This is attested by a communication and

contribution from "gadgeteer" Henry T. Hanson of Maynard, Mass. He says:

"In your column in the September issue of FIRE ENGINEERING there appeared an article describing the method

HYDRANT LOCATED AHEAD OF AND ON THE SAME SIDE OF THE STREET AS THE POLE.

HYDRANT LOCATED AHEAD OF AND ON THE OPPOSITE SIDE OF THE STREET FROM THE POLE.



HYDRANT LOCATED BEYOND AND ON THE SAME SIDE OF THE STREET AS THE POLE.

HYDRANT LOCATED BEYOND AND ON THE OPPOSITE SIDE OF THE STREET FROM THE POLE.

used by Basking Ridge, N. J., to help spot hydrant locations.

I am sending along a descriptive sketch of the method of marking used by the City of Leominster, Mass., which has several advantages over markings painted in yellow on the street. These markings are painted in yellow on the nearest electric pole to the hydrant and are at a level with the drivers eye, so that he can spot them from a considerable distance, and they are high enough up on the pole to be clear of snow during the winter months."

* * *

The Old Timer Says

I see some departments insist that every ladder on the fire building be 'butted' no matter how much punishment from heat or water the poor guy may take. Seems t' me this is kinda foolish. Mebbe, if a ladder's so set in that it should be butted when its bein' used, there should be a man stationed at its base, but why not lash the ladder with a bit o' line, tip and/or base, or both? Or, if this isn't feasible, put a man on the butt only when someone's climbing it? Under normal conditions there's little danger when nobody's using a ladder so why leave a man to do nothing but mebbe take a bath of water, or get a "fire-tan" at the foot of a ladder, when he could be more useful somewheres else!

* * *

A TIP ON HOUSING "TIPS"

Not all contributions for "Short Cuts and Gadgets" come from members of the fire service. This idea, however, advanced by Sherwin Day, of New York indicates that this reader has a pretty good working knowledge of firemanship. We quote Mr. Day's letter verbatim:

"I am not a member of any fire department, but I am interested in the fire service and I always look forward to reading FIRE ENGINEERING each month. I enclose a sketch of a very simple idea that might be of interest to someone in your 'Short Cuts and Gadgets' page.

"Rural and suburban fire departments often have their pumper hooked up a long distance from the fire. Changes in the caliber of hose streams often have to be made, and it seems to me that if all the nozzle tips were carried in a box, the tips could all be placed on the ground near the nozzle, and that would facilitate the changing of hose streams and eliminate a lot of running back and forth to the apparatus."

Editor's note: For a number of reasons it may not be practical to attempt to remove all the tips from the apparatus and carry them in a box to "near the nozzle" but Mr. Day's idea of locating all tips in one container, and marking the cover, as shown in this isometric drawing, has merit.

* * *

CANADIAN CONTRIB. SUGGESTS HOOK ON BOOSTER NOZZLES

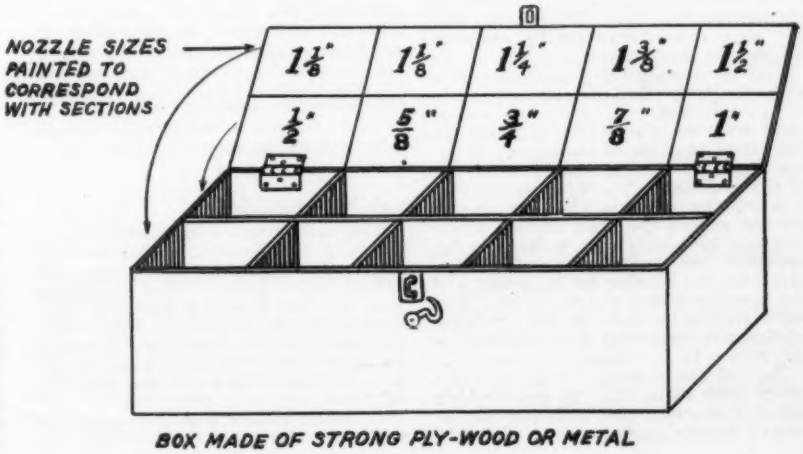
From Lieutenant Jack Shea, Central Fire Station, Hamiltor., Ont., Canada comes this idea which possibly may interest manufacturers of hose nozzles

and fittings, as well as firemen. He says:

"May I submit the following gadget which many fire departments will find very handy in outside work at dwellings, on awnings, etc.?

"For years the men have been pulling the ¾-in. with one hand and climbing with the other. As in the sketch, by putting an inverted hook on the ¾-in. nozzle it permits the use of both hands for climbing and working at fires. It (the hooked nozzle) may also be hung on a ladder rung.

Such hooks are on 2½-in. nozzles but only for hanging on rungs. The primary object of this gadget is to permit the use of both hands."



BOX MADE OF STRONG PLY-WOOD OR METAL

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Fire Eater's Fire Water OK

In San Francisco, Oley Barboure, 36, stuck a blazing ball of cotton into his mouth and spat out a stream of flame to light the torch he held in his hand. Whereupon Judge Daniel Shoemaker ruled "case dismissed" to Mr. Barboure's drunken driving charge.

As Mr. Barboure explained about the traffic accident of the week before, which resulted in his being pinched, the smell of liquor on his breath came from the whiskey-soaked cotton with which he makes his torches for his profession —that of fire-eater.

* * *

Now Fires Are Reported by Radio

Radio has taken another forward step which will affect the fire service. This is the use of short wave radio telephone by local newspapers in gathering and reporting on-the-scene details of news events, including fires and emergencies.

Now, from a staff car equipped with radiophone, reporters are put into direct communication with writers and editors in their newspaper offices, permitting a rapid, "blow-by-blow" of events—or in an emergency, direct with fire, police or other municipal services.

The same service, which speeds and simplifies newspaper reporting, will further the transmission of fire alarms, and the operations of emergency apparatus and forces. Radiophone equipped cars, whether operated by newspapers, taxicabs, buses or others, may also be utilized in emergencies to maintain communications with fire police, water supply and other muncipal services, through the hook up and the regular telephone exchanges.

First use of the radio telephone by a newspaper in Ohio was on October 10, last, when the Cleveland Press reporter "reported" from a picket line outside a struck industrial plant in nearby Euclid Using the press car, parked nearby, a description of the movements of pickets was radiophoned by the Press reporter, following which one of the pickets and Police Chief Roland Baehr of Euclid, Ohio, were both interviewed by the reporter and their remarks recorded at the newspaper's office. The reporter and car were then dispatched by radio to fill another assignment.

The service, operated in conjunction with the Ohio Bell Telephone Co., is by subscription. Although the equipment involved is somewhat complicated, the actual business of placing or receiving a call is almost as simple as the use of the established 'phone service.

A reporter picks up the telephone in his car, presses the "talk" button which connects him with the "mobile service operator" at the telephone exchange, gives her the number he is calling, and the operator makes the connection. His voice travels by radio to the receiving station and from that point by wire to the person he is calling.

To call the reporter in his car, the office caller dials "211" to get the long distance operator, then asks her for the mobile service operator, and gives the number of the automobile he is calling.

When the operator puts through a call, a bell rings and a light flashes in the car. The light remains on until the 'phone is answered.

Equipment in the mobile unit consists of a radio receiver and transmitter, antenna, selective signaling device, telephone instrument, and the bell and flasher light. The telephone instrument can be mounted under the dashboard, and it is almost identical with a cradle set telephone except that it has a "talk" button.

This radiophone installation is similar to that being installed on municipal taxicabs for the convenience of patrons and not greatly dissimilar from the modern radiophone equipment in use by the fire and police departments.

Obviously, the installation and use of such installations in mobile private and public vehicles will assist in the prompt sendng of more fire alarms and serve, at least indirectly in emergencies to facilitate communications between field forces and fire headquarters or other locations.

* * *

Noncomformist Fire Whistle

Portsmouth, N. H., has a fire whistle. It's a nice, lusty signal, as signals go but, according to the press and local gentry it's strictly a nonconformist. The fact of its nonconformity became apparent after it went on a spree recently and raised hob with the sleep of many city folk.

The local skeptics, who've been casting a bilious eye at the 'tooter', had their suspicions confirmed a few days later when, at 1:31 of a morning, a false alarm was sounded from Box 54, whereat the Morley and central station whistles and the North Church bell took up their mournful sounding of the box number.

On the third round, the Morley whistle revolted at the dull routine and switched to one long, sustained blast, which went on and on and on, with local folk wishing they could trottle the thing. Finally, somebody did just that, and it died, emitting one last defiant gasp as it expired!

Moments later, apparently realizing the alarm was false, the individualistic whistle sounded its own three-blast recall, several minutes before the central station officially sounded the "all-out" for the alarm. Which about climaxed the report. according to our contrib'— Cecil L. Shafer, Army Service Forces, who sent us the yarn.

* * *

Coin Fire Extinguishers

This one comes from Emil Johnson, Chief of the Boulder, Colo., and it's about the University co-ed who appeared before Acting Police Magistrate Paul M. Bunzel with a summons for a parking meter violation. She readily acknowledged she hadn't put a coin in the meter where she parked her car but she said didn't know she was supposed to.

"Don't you know what the meters are for?" the judge asked her.

"No", she replied.

"What did you think they were?"

"I asked some of the boys on the hill and they told me they were fire extinguishers."

"Fire alarm boxes?" persisted the judge.

"No, fire extinguishers" she repeated.

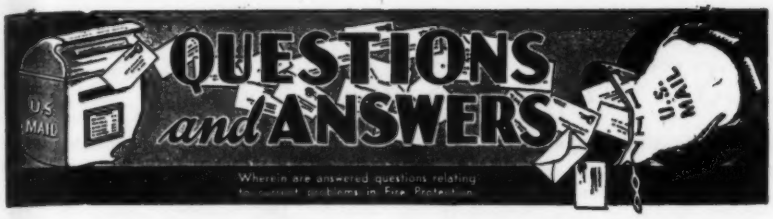
Judge Bunzel explained that the only thing these devices will extinguish is the coin inserted in them.

* * *

Hot Off the Tape

It is estimated it will take seventy five days to clear the 2,000 tons of twisted steel, and 300 truckloads of charred timber of the St. George Ferry Terminal, which burned June 25. . . . Unable to find loot in the Kimball Theatre, Yonkers, N. Y., a burglar set fire to 15,000 ft. of motion picture film. . . . The National Association of Junior Fire Fighters was organized in Milwaukee, Wis., to provide information for fire prevention programs and to encourage fire safety programs among youths and adults. . . . There was much talk about burning down the jail during the riots in Athens but actually fire setting was negligible. . . . Thirteen persons were overcome and nearly 100 endangered when deadly chlorine gas poured from a broken pipe into the bleaching mill of the Kalamazoo Vegetable Parchment Company plant at Parchment, suburb of Kalamazoo. . . . Gas was being piped from a tank car, when mill operator detected escaping fumes and spread alarm. Mill officials donned gas masks and shut off gas. . . . In Philadelphia a two-alarm fire which swept through the Pine Street Turkish Baths routing 25 patrons proved to be the answer to a fireman's dream. It was ladies day. . . . Two Negroes were killed in Cicero, Ill., when they were overcome by poisonous fumes from a rendering furnace in the Hurley Machine works. Two others were injured. . . . The original 9 x 16 ft. painting of "Custer's Last Stand" was destroyed by fire at the Fort Bliss Officers Club, El Paso, Tex. Adolphus Busch, Sr., originally paid $30,000 for the picture, thousands of copies of which adorned taverns and bars. . . . In Spokane, Wash., W. Queen showed more than passing concern over reports that boys were shooting through his building's windows. For, stored in the structure are gasoline and dynamite. . . . A big hearted neighbor of Eng. 21, N. Y. F. D. has presented "Smoky," Dalmation mascot of the company, a burial plot in canine cemetery at Hartsdale, N. Y. . . . As Ray Willsey, 39. a carnival fire-eater was lighting a fire preparatory to going into his act, in Jamestown, N. Y., a can of gasoline nearby exploded and he was badly burned.

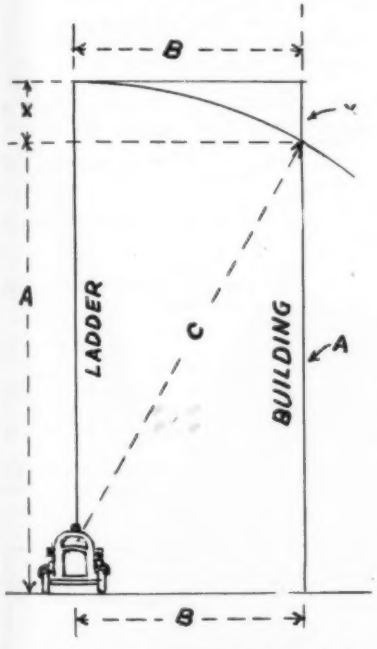
The Northern California Fire Chiefs Association held its Annual Convention and conference at Hoberg's, Lake County, Calif., Oct. 13-15 inc. Besides a weighty business program there were demonstrations of latest type fire fighting equipment and extinguishing agents. . . . The Ohio Fire Chiefs Association has recommended that four or six new positions be created in the State's fire marshal's office to inevstigate incendiary fires. . . . Curbing of delayed alarms in the reporting of fires through the popularization of each community's fire department telephone number was an objective of the nationwide fire prevention program of the National Association of Insurance Agents during October's Fire Prevention Week.



Placement of Ladder

To the Editor:

An 85-foot aerial truck is placed against the curb of an ordinary sidewalk in accordance with the rules and regulations of the department. It is desired to raise the aerial to the fifth floor window of a seven-story ordinary brick building. The ladder is intended for both rescue operations and the operation of hand-lines.



The procedure is to raise bed ladder vertical, turn ladder and wind out splice to the desired height.

In order to bring the ladder to the proper position, how far, or rather how many feet would you wind out splice above the fifth floor window sill to make up for the loss in footage due to lowering ladder into building.

W. E. R.

Answer: This enclosed sketch will give you a formula for finding out the amount the ladder has to be extended to reach a certain point on the face of a building.

We shall let A be the height on the building where the ladder is to touch.

B, the distance of the base of the ladder from the building.

X, the amount the ladder is extended.

C will be the total length of the ladder when it is extended a distance X.

Then $C = \sqrt{A^2 + B^2}$

$X = C - A$

$X = \sqrt{A^2 + B^2} - A$

There is a slight discrepancy in the use of this formula due to the fact that the ladder pivots at a point above the surface of the street, rather than on the surface of the street. However, this discrepancy is not serious.

As an example, assume that A is 60 feet; B, 30 feet. Then C is the square root of $A^2 + B^2 = \sqrt{3600 + 900}$

$= \sqrt{4500}$

$= 67$ feet

Then X, the amount the ladder will have to be extended will be C — A, or 67 — 60, or 7 feet.

Siphon Discharge

To the Editor:

An engine is pumping at 200 pounds pressure through 150 feet of 2½-inch hose to which a siphon is connected with a nozzle jet of 1⅛ inches, in order to pump waste water from a cellar. The lift is six feet. A 4½-inch suction tube, 10 feet long is connected to the discharge side of siphon. How many gallons of waste water per minute will the siphon discharge.

I solved this problem as follows:

Using the formula Nozzle Pressure = Engine Pressure ÷ (1.1 + KL), I get a nozzle pressure of 124.92 pounds and using the formula for discharge, a discharge of 424 gallons per minute at the siphon jet.

Gallons per minute of waste water

$$= \text{Eff.} \times \left(\frac{2.304 \times Q \times P}{H} - Q \right)$$

where Q is the discharge in gallons per minute and P the pressure at the siphon jet. H is the height the water is to be raised. An efficiency of 50% is considered very good for a low lift on a siphon and as 6 feet is a low lift, 50% will be used.

Then gallons per minute of waste water

$$= .50 \times \left(\frac{2.304 \times 424 \times 125}{6} - 424 \right)$$

= 9,964 G. P. M. of waste water discharged by siphon.

Obviously the above solution is incorrect.

R. F. W.

Answer: Your calculations are correct, but you have employed entirely too high a pressure on the siphon for such small lift.

Actually, when a siphon is being used for dewatering basements, low pressures are employed for low lift, and these pressures are usually delivered from a hydrant.

The cause for the wide discrepancy is largely because of the friction loss in the 4½-inch hose which is serving as a discharge hose. For a flow of 9,900 gallons per minute, the friction loss in a 10-foot length of 4½-inch hose is approximately 300 pounds. If two lengths were used, the friction loss would be in the neighborhood of 600 pounds.

You can appreciate that the pressure on the siphon nozzle would be incapable of overcoming 300 pounds friction in the 4½-inch discharge hose.

The formula employed for calculating the discharge developed by siphon is what is known as an empirical formula and is designed for use only on problems which might be considered as entirely practical from the standpoint of fire department operational methods.

A high nozzle pressure on the siphon is, of course, necessary for high lift; a pressure of from 20 to 40 pounds would be entirely satisfactory for a lift of only six feet.

It would be possible to develop formulas which would include the friction loss in the discharge hose line, but they would be extremely complicated

Friction Loss, Discharge and Pressure

To the Editor:

An engine at 150 pounds is pumping through a 600-foot line of 2½-inch hose (single line) equipped with a 1⅛-inch nozzle.

What is the friction loss in the line?

What is the discharge from the nozzle? What is the nozzle pressure?

E. S. R.

Answer: The solution to your problem is as follows:

Nozzle Pressure
= Engine Pressure ÷ (1.1 + KL)
K, a factor depending on hose and nozzle diameters, is .167.
L, the number of 50-foot length of hose in the line, is 12.
Engine pressure is 150 pounds.

Then N. P. = E. P ÷ (1.1 + .167 × 12)
= 150 ÷ 3.104
= 48.3 pounds

Discharge (GPM)
$= 29.7 \times 1\frac{1}{8} \times 1\frac{1}{8} \times \sqrt{48.3}$
$= 29.7 \times 1.125 \times 1.125 \times 6.95$
= 261 gallons per minute

Friction loss
= Engine pressure — Nozzle Pressure
= 150 — 48.3
= 101.7 pounds.

Wye and Siamese Connections

To the Editor:

We would appreciate your telling us the difference between a wye and a siamese connection.

What is the friction loss on a 400-foot parallel stretch of 2½-inch hose

(*Continued on page* 863)

FALSE ALARMS

Who Said Pipe Dreams?

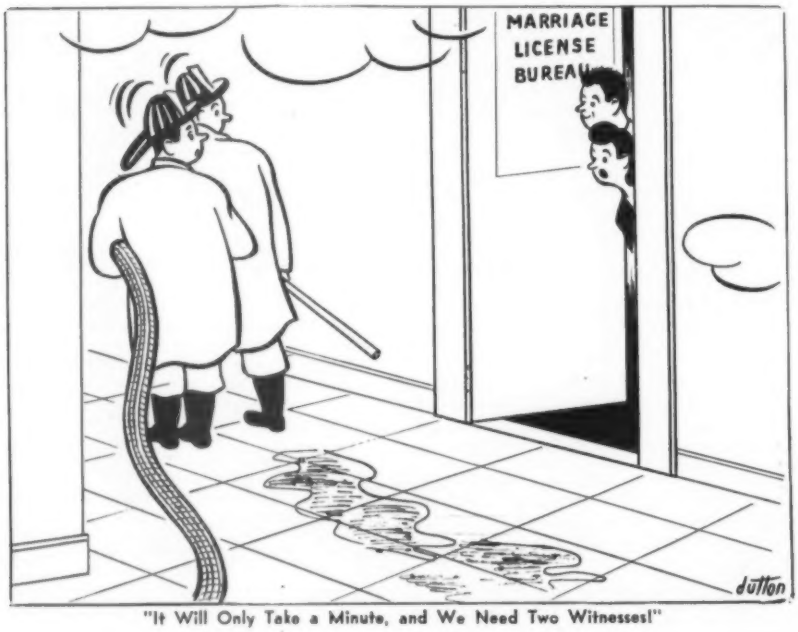
If you have any idle time on your hands, take up pipe-smoking and you'll never have another idle moment, what with cleaning, filling, lighting, packing, loosening, relighting, tamping, puffing, cleaning, filling, etc., etc.

The fireman meekly spoke to the lingerie clerk: "I want a brassiere for the old battle axe."

Clerk: "What type, please?"

Fireman: "Why, do they come in types?"

Clerk: "Oh, yes, we have three different kinds—the Gestapo for the masses, the Salvation Army for the fallen, and the O. P. A. for making mountains out of mole hills."



"It Will Only Take a Minute, and We Need Two Witnesses!"

The conceited oaf, noticing a dazzling redhead sitting in the lobby of a swank hotel, sidled up to the desk and registered as man and wife. A few moments later he was talking with the beauty. A few days later the clerk handed him a bill for $800.

"Why," he growled, "I've only been here three days!"

"We know that," replied the clerk, "but your wife has been here two months."

"I'm afraid John doesn't intend to propose very soon," wailed the anxious maiden.

"He gave me a perfectly huge box of stationery yesterday."

"Is that bad?"

"Decidedly. It has my present initials on it!"

"A chip on the shoulder indicates there's wood higher up."

Fooiel

Two buck privates paused by the roadside to look at a dead animal.

"It has two stripes—what is it?" said one.

"That settles the question," said the other. "It's either a skunk or a corporal!"

The Three Bears

Papa Bear: "Who drank my beer?"
Mama Bear: "Who drank my beer?"
Baby Bear: "Burp."

Stella Finegold, entertaining a gentleman friend in her apartment while Mr. Finegold was presumably away for the evening, suddenly heard her husband's key in the lock. "Quick, Morris!" she exclaimed, "Out the window!" Finegold will kill us both if he finds you here!" "But Stella," Morris objected, "the window is thirteen floors above the street!" Mrs. Finegold threw up her hands and screamed "God forbid at a time like this we should be superstitious!"

The mountain girl walked into the voting place and asked for a ballot. She was asked what party she had affiliated with, and she demanded to know if she had to answer that question. She was told that she would have to answer if she got a ballot. She bristled and said, "Then I don't want no ballot. The party I affiliates with ain't divorced yit!"

A Sultan at odds with his harem,
Thought of a way he could scarem.
He caught him a mouse,
Set it lose in the house;
Thus started the first harem-scarem.

"Come Right In Gentlemen. Mr. Throop Is Expecting You!"

AKRON *the Original and Genuine*

TRADE **ROCKERLUG** MARK
REGISTERED

More than 20 years' use by ninety per cent of the municipalities in the United States has proved the *genuine* Akron ROCKERLUG to be the outstanding fire hose coupling. Genuine ROCKERLUG, made only by Akron Brass, offers definite advantages — saving time — saving money — increasing fire fighting efficiency.

Don't take chances with imitations. Always specify genuine ROCKERLUG couplings made by Akron Brass.

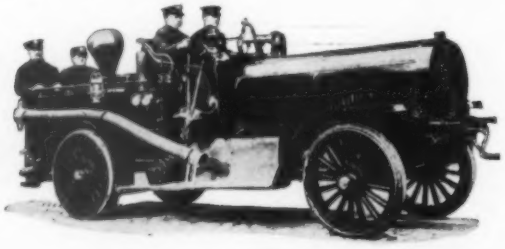
AKRON BRASS MFG. COMPANY, INC.
WOOSTER, OHIO

Only
AKRON BRASS
offers you genuine
ROCKERLUG Couplings
with these features:
HIGBEE THREAD
HIGBEE INDICATOR
TAPERED STILL THREADS

FIREMAN FREDDIE SAYS: When buying equipment to safeguard lives and property from fire, it should be a "must" to buy the BEST!

AKRON BRASS
FIRE FIGHTING EQUIPMENT

Illustrated above is one of twenty WATEROUS Equipped Ward LaFrance Pumpers now being delivered to New York City Fire Department.



New York's *first* motor-driven pumper, in 1909, shown above, was a WATEROUS—the engine, transmission, etc., as well as the Pump were WATEROUS, and now thirty-seven years later the WATEROUS Pumps going into the New York City Fire Department are built according to the same high standards.

You, too, can have WATEROUS dependability by specifying WATEROUS on your new piece of pumping equipment. WATEROUS Pumps are the standard of nationally recognized fire apparatus. Waterous Dependable SINCE 1886

WATEROUS COMPANY • ST. PAUL, MINNESOTA

WATEROUS FIRE PUMPS

Fire Prevention Week

(*Continued from page 822*)

fire-fighting operations in their communities. In some instances the Emergency Plan's mutual aid system was invoked, neighboring fire forces being called in to battle simulated conflagrations."

Tarrytown Stages Fire

In Tarrytown, N. Y., the Fire Department, under Chief Robert Livingston and Assistants, Pellegrino and Vincent, fought a realistic but staged fire in a downtown business black.

Red flares and smoke bombs added realism, as did the response of Conqueror H. & L. Co. and Riverside Hose Co., with its radio-equipped pumper. A large crowd witnessed the attack on the simulated fire and applauded the operations which included stretching-in, laddering the structure, jumps into the life net, removal of rescued persons and "overcome" firemen, and other fire-fighting activities. During the fire, the two-way radio of Riverside Hose was used to summon ambulance units and outside aid, and maintain communications with fire headquarters.

By means of a public address system, all details of fire fighting operations were explained to the spectators, and the running account was linked with plentiful sales talks on fire prevention. All local village officials, police, the press and officials of the County's Fire Chief's Emergency Plan were present.

Memphis Has a Motto

In Memphis, Tenn., always a contender, and often a winner in Fire Prevention Week campaigns, the Fire Department under Fire Chief Connie O'Sullivan played a prominent part in promoting the week.

This year, newspapers all carried a front-page montage illustration of Chief O'Sullivan against a background showing some of Memphis's most costly fires, with the caption "'F-I-R-E' Spells 'W-A-S-T-E' Says One Who Knows."

Below was this message: "'F' stands for Fatalities, and the needless sacrifice of lives, 'I' for insurance losses, 'R' for ruins that smolder and smoke, 'E' for Employment lost as pay rolls cease—put them all together and they spell 'FIRE', the most unnecessary evil to mankind."

Camp Picket Promotes F. P. Week

Among the military posts and depots, which waged enterprising fire prevention drives, is Camp Pickett, Va. It is disclosed that Pickett's losses dropped 93.7 per cent during the last twelve months.

According to Major E. K. Mattern, post engineer, and Major Paul R. Bickford, officer-in-charge of fire prevention, the three main contributing factors to the low loss record are:

1. Constant inspectors for fire hazards and strict enforcement of the post fire department regulations.
2. Excellent cooperation by post personnel, military and civilian in conforming with fire prevention regulations, and
3. Efficent operation of the fire department.

APPROVED BY U. S. BUREAU OF MINES

for Complete respiratory protection...

DURING FORTY-FIVE MINUTES USE UNDER HARD PHYSICAL WORK

M·S·A

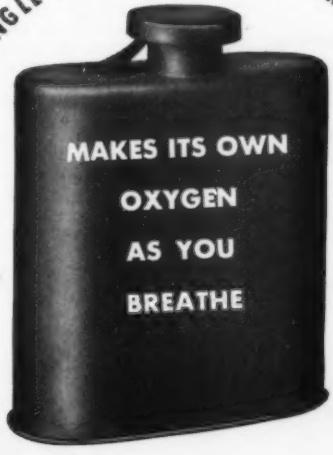
Chemox

SELF-GENERATING

OXYGEN BREATHING APPARATUS

- Fog-free lenses
- Weighs only 13½ lbs. ready for use
- Minimum maintenance
- Simple to use—no cylinders, high pressure valves, or fittings

A SINGLE REPLACEABLE CANISTER DOES THE WHOLE JOB!



WHERE you can't breathe with safety in smoky, gassy, oxygen-lacking confined spaces—wear CHEMOX! Chemox supplies all the oxygen you need, no matter how hard your exertion or how tough and dangerous the fireighting job. Chemox is light and compact—easy to wear—you can change canisters in a matter of seconds!

Write for new Chemox bulletin.

MINE SAFETY APPLIANCES COMPANY

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TORONTO . . . MONTREAL . . . CALGARY . . . VANCOUVER . . . WINNIPEG . . . NEW GLASGOW, N. S.

IN THESE DAYS A PLANT WON'T RISE FROM ASHES OVERNIGHT

BETTER CHECK YOUR FIRE EQUIPMENT NOW

Construction jobs are slower; building costs are higher. For your own safety and savings, make a fire protection survey in your plant—you may find your present protection dangerously inadequate or outmoded. If you have expanded your plant or added new processes, check your fire protection equipment carefully—the time to check is now—tomorrow may be too late.

Pyrene protects every risk. There's specific equipment for every hazard:

Pyrene Water-Type—contains plain water, discharged by pressure from gas cartridge. No chemicals, no annual recharging. Approved for fires in wood, paper, textiles, etc. in stores, offices, factories and schools. Also soda-acid type.

Pyrene Vaporizing Liquid puts out fire in electric equipment—transformers, rheostats, generators, engines and flammable liquids of all kinds. It smothers the blaze without injuring equipment or conducting current.

Pyrene Foam Playpipes are specifically designed to blanket large stores of oil, gasoline, naphtha, resins, solvents and other flammable liquids in a fire-blanketing layer of tiny bubbles.

If you are in doubt on your fire protection or require additional equipment, let a Pyrene jobber or one of our engineers help you. Write today for information.

Pyrene

Pyrene Manufacturing Company
NEWARK 8 NEW JERSEY
Affiliated with the C-O-Two Fire Equipment Co.

Water for Fire Extinguishing

(*Continued from page* 824)

tifically controlled. Nor will its application be confined to any one method as heretofore—various methods will be employed under various conditions. Gone will be the days when the fireman feels that he had done a good job because the grand piano just floated out the front door.

He will not take pride in the amount of water he is putting into the building but in the amount of fire he is putting out with a minimum quantity of water. For the vast majority of his fires and for practically all dwelling fires, he will use booster and 1½" fog lines at somewhat higher pressures then he now uses. He will handle more and more of his fires with the water from his booster tank, which will be considerably larger in capacity. Hydrant lines will not be used nearly as often as heretofore. On the other hand, large capacity pumpers and large capacity deluge sets, ladder pipes and deck guns delivering either fog or solid streams will be available where conditions are such that they may be required. Fog or spray and solid stream lines will frequently be used in conjunction with each other.

The use of fog or spray nozzles of varying characteristics will become standard practice on fires of all classes. While their greatest contribution to the fire service will undoubtedly be in connection with Class A fires, which constitute our major fire problem, we must not discount their value on Class B fires either to effect direct extinguishment, to control the fire and protect exposures, or in combination with foam in the form of fog-foam. They will be used to expel smoke and toxic gases and to reduce the hazard of explosion by cooling the atmosphere and reducing its dust or combustible gas content. They will be used to cool off hot gases and heated atmosphere and thereby retard the extension of a fire, and they will be used to protect personnel effecting rescue or operating in exposed positions.

Water can be, and will be, a very versatile tool in the hands of the coming generation of firemen. They will use it in a variety of ways to meet different situations. Even its natural characteristics may be changed by chemical treatment that will increase its spreading and penetrating action.

The fireman of tomorrow will have many more types of equipment to work with and he will be much more scientifically trained in their use. He will be to a greater extent than ever the master of his art; an art that under the impact of modern technological development stands today on the threshold of a new era.

Motor Fire Apparatus

(*Continued from page* 829)

tight. Suction strainers should be placed so that they will not draw up mud nor draw in air, forming a whirlpool on the surface of the water.

By experiment the best position of pump stages in centrifugals can be found, as it is characteristic of some centrifugal pumps to draft water better in one position than in another. Excessive speed on the motor does not help in priming operations. Motors should be run at a speed range of 750-1000

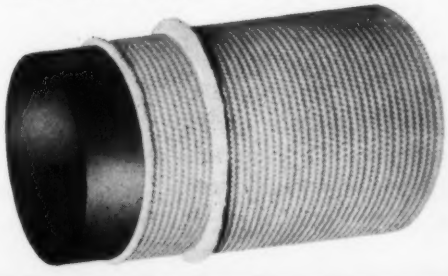
FIGHT FIRES FASTER—WITH

FLEXIBLE BWH FIRE HOSE!

When minutes count, firemen want hose that's easy to handle . . . yet strong enough to withstand high pressures and falling debris. That's why so many communities choose BWH, the original woven fire hose.

Couplings, nozzles, and fittings are perfectly made and fitted to the hose in BWH's own modern foundry.

Remember, BWH Fire Hose has a record of 68 years of successful service. Make it your choice when next your city needs fire hose.



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Agents In All Principal Cities

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EVERY LENGTH OF EUREKA FIRE HOSE TESTED FOR BURST RESISTANCE, ELONGATION, WARP AND TWIST

Among the other advantages of every *Streamlined* Eureka Fire Hose are Smooth Interior Filler Ply for maximum nozzle pressure, Mildew Proofing with "Formula X", Balanced Weave and Controlled Curing to eliminate excessive warping and stretching, and Bomb Tested linings for longer wear.

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

1230 Avenue of the Americas • Rockefeller Center • New York 20, N. Y.

rpm. It is injurious to pumps to run dry for over one or two minutes during priming operations without lifting water. At the end of this time, if water is not flowing into the pump, shut the motor off so that everything is quiet, and listen for air leaks in the fire pump or suction lines. This is the quickest method of tracing the source of trouble. After the trouble is located and corrected, the priming pumps and fire pumps should be relubricated and the operations repeated. On positive displacement pumps a discharge gate should be opened to aid in discharging the air; but on centrifugal pumps all parts of the fire pump should be completely sealed in order to prevent air entering the fire pump during the priming operation.

Once water is lifted, a drain on the discharge side of the pump should be kept partly opened. This provides a continuous circulation of water through the pump whether or not lines are open. It also prevents water from heating up, due to being rapidly churned in the pump, which makes it difficult to maintain vacuum. Even in the best of pumps there is always a small amount of air drawn in with the water or through slight leaks in the connections or pumps. If there is no means of escape for this air, such as happens when lines are shut down, it forms a pocket which increases in size until finally the vacuum is broken, and the water is lost.

In drafting water, maximum discharge may be determined from the point at which an increase in motor speed gives no increase in pump pressure. Racing the motor beyond this point is wasted effort and injurious to the apparatus. It only results in what we call "running away from the water."

The needle of the vacuum gauge tells a story in itself. At the outset is rests at a point corresponding to static head. However, as the discharge is increased, the reading will increase. If an abnormal increase is noted it is an indication that the level of the water has dropped, thereby increasing the static head, or it means that suction strainers are blocked or the lining of the suction hose has collapsed.

If during drafting operations it is found necessary to use the auxiliary cooling system, the radiator, fire pumps and the coils of the cooling system should be drained and flushed out, using fresh water.

If the foregoing suggestions are followed, drafting operations should present no more difficulty than ordinary operation at a hydrant.

Best's Safety Directory

The first annual edition of Best's Safety Directory, issued by The Alfred M. Best Company, 75 Fulton Street, New York City, has been announced by the company's Safety Engineering Division.

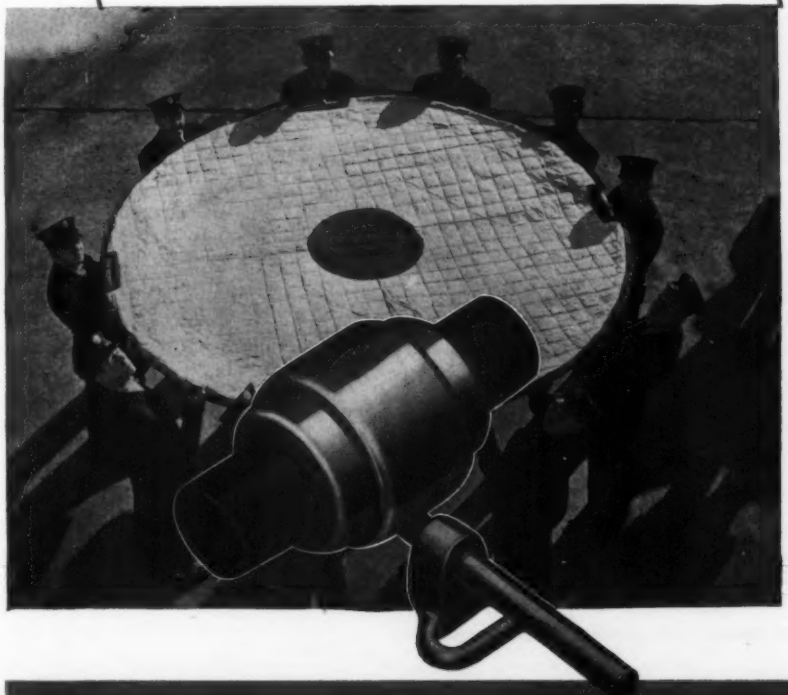
The book offers management, fire fighters, safety directors, plant superintendents and others interested in safety promotion, information on over 1,000 products, devices and equipment used in safety, first-aid, hygiene, health conservation and fire prevention. Besides listing all safety products the book describes the hazards and remedies, emphasizing the need and field of use of each product and giving the names and addresses of manufacturers, distributors and local dealers.

Chief, Get This Item In Your 1947 Budget!

1947 F. Dept. BUDGET

2,000 FT. 2½" DOUBLE JACKET
ATLAS LIFE NET
ATLAS BELTS
TURRET GUN
INVINCIBLE
CANVAS

Specify the only net that will meet modern Fire Department requirements!



Here is the net that proved its worth at Dubuque and other hotel fires during 1946. Get it in your 1947 budget by all means. Make no mistake in the net you specify or buy. Make certain it is built with strong, dependable shock absorbers such as only ATLAS LIFE NETS give you. Make sure you get FORGED STEEL HINGES, not cast iron. Only ATLAS gives you that ADDED SAFETY feature. Send now for folder on ATLAS NETS, study the sturdy construction and you'll agree with us that this is the only net that meets MODERN fire fighting requirements.

ATLAS SAFETY EQUIPMENT CO., Inc.
26 WARREN STREET ★ ★ ★ ★ ★ ★ ★ NEW YORK 7, N. Y.

Crippling Loss or Quick Extinguishment?

● If a tough, fast-moving fire attacks your plant, is your on-the-spot fire fighting equipment *big enough* and *fast enough* to assure a quick victory?

Cardox Fire Extinguishing Systems . . . using the distinctive Cardox methods of engineered control and application that have greatly broadened the scope of CO_2 fire protection . . . provide outstandingly fast and effective protection for one or many critical or major hazards.

A Cardox Fire Extinguishing System is engineered to definite fire protection standards . . . to provide *all* the advantages of CO_2 extinguishment, unhampered by any practical limitations on the amount of extinguishing medium available, in seconds. By the distinctive Cardox method, carbon dioxide is stored at 0° F. and relatively low pressure in a single ¼ ton to 125 ton storage unit . . . assuring enough Cardox CO_2 to handle even large fires and have ample reserve for new emergencies.

Cardox Engineering and Research Staffs will welcome the opportunity of helping you evaluate accurately the plus value of a Cardox System in the protection of your specific operation.

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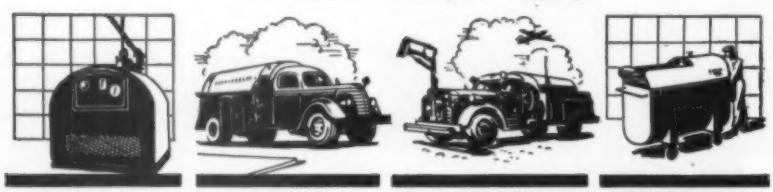

FIXED FIRE EXTINGUISHING SYSTEMS | FIRE TRUCK—Tons of CO_2 on Wheels | AIRPORT FIRE TRUCK | TRANSITANK—Capacity—750 pounds

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CO_2 FIRE EXTINGUISHING SYSTEMS

Echoes of the War

By Roi B. Woolley

End of the Normandie

Final chapter in the tragic history of the liner Normandie has been written with the disposal of the rusty, ruin of the once pride of France's mercantile marine, to Morris E. Lipsett.

Lipsett, who paid the U. S. Maritime Commission $161,680 for all that's left of the ship, which cost $65,000,000 (exclusive of the millions paid out by this country in raising and moving the wreck after the fire of February 9, 1942), said that he bought it as a gamble. He paid $3.80 a ton for the scrap steel in the hulk but doesn't know what it will cost to get the metal out. Scrap steel is at present selling at about $15.33 a ton.

America will pay the French government $13,500,000 for the ship, which sum, it is said, will be used by the French to purchase some of our Liberty ships.

Although the Normandie proved to be a white elephant since the nation took it over and renamed it the Lafayette, she was not a total loss. In righting her the Navy trained many divers and ship workers who later did yeoman's service in clearing wrecked ports and keeping the maritime supply lines open.

Fire fighters of New York, who struggled to save the ship on that memorable and chilly February afternoon, will never forget that battle . . . nor will the Navy personnel who lost most of their belongings—and the scores who narrowly escaped with their lives. There never was a fire like it. There will in all probability never be another.

* * *

Hot Off the News Ticker

The 10,000-ton Liberty ship Cassius Hudson was crippled in October by sea mines off Trieste, Italy. This and other mine fields sown by Germans in the last war will endanger commercial shipping for some years it is said. . . . In October, the Admiralty announced that two British destroyers struck unexplained mines in the Mediterranean near Epirus with "some casualties" to crew members. Both ships remained afloat. . . . Officers and men of the R.A.F. (Royal Air Forces) stationed in Iwakuni, Japan, fought a fire in a high-octane gasoline dump which swept the area. They saved three-fourths of the 500,000 gallons stored in the dump. . . . Units of New York City's marine fireboat fleet saluted the great liner Queen Elizabeth as she steamed up the North River on her first peacetime passenger trip. . . . A three-hour fire in the hold of the U. S. S. Wayne, Navy auxiliary vessel in drydock in Hoboken considerably damaged the hull. Firemen on two-alarm assignment controlled fire, said to have been caused by sparks from a welder's torch. . . . George W. Angell, fire prevention official of the Allied Headquarters, Japan, estimated that fire losses in Japan this year would be more than 1,200,000,000 yen. Opening a drive against what he termed "amazing indifference" to fires by the Japanese, Angell said that twenty-six had been killed and 240 injured between May 1 and August 1, 1946. . . . Two thousand tons of rubber and other property with a total value of $1,660,000

GUARDING THE LIVES OF MILLIONS FROM COAST TO COAST

MORE FIRE DEPARTMENTS ARE SPECIFYING THE

MARS SIGNAL LIGHT

FOR THEIR NEW APPARATUS THAN EVER BEFORE!

THEY KNOW FROM PAST EXPERIENCE THE LIGHT FROM MARS IS ALWAYS DEPENDABLE — TROUBLE FREE

Mars Light Is Fully Guaranteed for Five Years

Mars Has Never Failed To Back Up This Guarantee and Never Will

Standard Equipment In Over 300 Fire Depts. from Coast to Coast

Introducing MARS Combination Siren and Figure 8 Red Light, Streamlined, in One Unit. Chrome Finish.

MARS combination siren and Flashing Red Light in one compact unit. The siren and flashing light can be used separately or together. Foot switch supplied for the siren and dash switch for the light. Chrome plated, red or black. Two sizes, 4½" and 6".

Insist on MARS when you order New Equipment —Install it on Present Equipment.

The most popular siren for chief's cars and apparatus. Many thousands in use by large and small fire departments. Balanced rotors, light weight die-cast throughout, chrome plated. Red or black. Two sizes, 4½" and 6".

IMMEDIATE DELIVERY

For prices and complete information write to

MARS SIGNAL LIGHT CO. 5737 W. DIVISION ST. CHICAGO, ILL.

It's MARS from Coast to Coast

were destroyed in a recent fire in the Borneo port of Bandjermasin, Batavia. . . . The famed Narwhal, World War II submarine, was swept by flames for the second time in two weeks at the Quaker Shipyard & Machine Co., Camden, N. J., where she is being scrapped. . . . Fire, which damaged the Wellington, N. Z., Exhibition Building that city, destroyed 31,000 bales of wool, valued at approximately $2,240,000 and a quantity of New Zealand Air Force equipment. . . . Fire broke out on the aircraft carrier Ark Royal under construction at Birkenhead, Eng., but was extinguished with slight loss. . . . Three American soldiers and three German prisoners of war were killed when a ton and a half of German munitions exploded unexpectedly near Frankfurt Am Main, Germany. . . . Fire damaged the U. S. Cruiser Huntington, in Italian waters; Reports state that the fire starting in insulation, was extinguished in forty-five minutes by the British Royal Navy Fire Service. . . . Hundreds of homeless persons evacuated from the area of Fort Gagaresse, near Toulon, France took refuge in the city after an explosion which killed forty-three persons and injured fifty-seven. Mines, piled to await disposal on the beach, let go unexpectedly only thirty feet from a place where hundreds were bathing. . . . A fire in the storeroom of the 35,000-ton liner Mauretania in Liverpool was extinguished in twenty minutes. . . . Three military American government buildings in the Stuttgart, Germany, area were damaged by bombs in what was described as the first organized aggressive German underground activity in the U. S. occupation zone since the end of the war. No casualties.

* * *

Adding to Our Hazards?

Amid all the publicity (most of it founded on fact) about superrockets and guided missiles, it is disclosed that the Army Air Forces has started a $25,000,000 to $35,000,000 development program in Muroc Dry Lake, Calif., to develop the 70-square mile area into the world's largest airport for jet and rocket aircraft.

It is said the project will require ten years for completion, but already there are two big permanent hangars and some temporary ones, with workshops, offices and Army barracks on the dry lake bed. Runways are reported the longest in the world, one extending seven miles.

In the early days of the war the lake was used for bombing practice, and extensive secret tests of experimental aircraft and rockets have been conducted in the area, located ninety miles from Los Angeles.

Many of the Army's latest planes are located there, including the giant XB-35 Northrop "flying wing," the 10,000-mile, 10,000 pound bomber, and the Douglas XB-43 jet bomber with a 400-mile-an-hour speed and an 800-mile range.

Just what this development, and the Army's experiments with V-2 rockets being conducted at White Sands, N. M. —where rockets have been shot over 100 miles into the air—will mean in the way of added hazards to the contiguous areas is problematical but fire chiefs who envision the future do not discount the problems this project will create.

ORDER
INDIAN FIRE PUMPS NOW!

Fire Commissioner Says that

"INDIAN FIRE PUMPS WILL EXTINGUISH 75% TO 80% OF ALL FIRES"

THEY USE ONLY CLEAR WATER

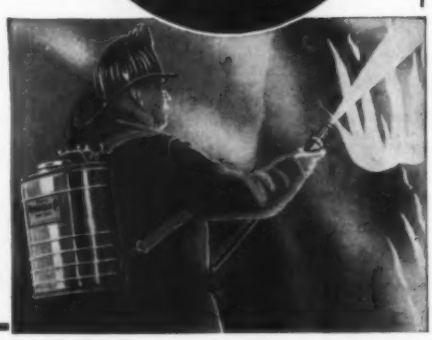
D. B. Smith & Co.
Utica, N. Y.

For the past 12 years we have stationed on our apparatus *INDIAN FIRE PUMPS* for first aid work in fire extinguishment.

We have used them for open fires and confined fires and find them equally efficient both inside and outside of buildings.

The *INDIAN FIRE PUMP* is a compact, efficient fire fighting machine and, properly and quickly used, will extinguish or control 75% to 80% of all fires.

Very truly yours,
J. N. Sullivan, Commissioner



D. B. SMITH & CO.
406 MAIN ST.
UTICA 2, N. Y.

Convention Dates

Dec. 18—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting, Chappaqua, N. Y. Secretary, Chief Edward H. Carney, Fire Headquarters, Chappaqua, N. Y.

Jan. 7-10—FIRE DEPARTMENT INSTRUCTORS' CONFERENCE. Annual meeting, Memphis, Tenn. Director, Richard E. Vernor, Box 1089, Chicago 90, Ill.

Aug. 26-29 (Tentative)—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, New York, N. Y. Secretary-Treasurer, Chief Daniel B. Tierney, 8 Robbins Road, Arlington 74, Mass.

Send in Your Meeting Dates

As a service to its readers FIRE ENGINEERING endeavors to maintain an up-to-date list of all county, state, regional and national organizations and associations in the fire service, and the dates on which their annual conventions are to be held.

Officers of associations are invited to forward the editors, at the earliest opportunity, the roster of association officers, and the dates (actual or approximate) on which conventions are scheduled.

This information will be listed under the heading "Convention Dates."

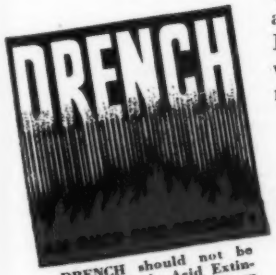
DRENCH triples your water supply!

When you get in to kill a fire, it helps to know that you have enough water to do a complete job . . . knock it down and keep it down.

That's what DRENCH will help you do. Just a 1% proportion by volume added to your water supply will triple its fire fighting effectiveness. DRENCH extends your water coverage . . . fights fire faster and is also effective on oils with flash points of 100°F, or higher. Its deep penetration prevents recurring blazes, reduces the need for re-wetting and conserves your water supply.

Wardens, Rangers, Volunteer Companies and other fire-fighting groups who are constantly confronted with limited water supply should have this new, amazing extinguishing agent on hand at all times. DRENCH is easy to use. There's no complex procedures to obtain correct proportions and it can be used in all common types of equipment.

Send for complete information and see how DRENCH will triple the water supply in your fire fighting equipment.



DRENCH should not be used in Soda Acid Extinguishers or Calcium Chloride Solutions

ARNOLD, HOFFMAN & CO., INC.

FIRE SPECIALTIES DIVISION

55 Canal Street, Providence, R. I.

Persons in the News

Michael J. Shea Dies

Michael J. Shea, 70, who retired as Chief of the Fitchburg, Mass. Fire Department, after more than forty-four years in the service, died following a long illness.

Beginning his service as a call-fireman in 1902, he was named permanent fireman in 1907, promoted to lieutenant in 1917, district chief in 1930 and chief of department in 1932. He retired on pension on May 10, last, but was reappointed on a temporary appointment basis to serve until June 1 at which date all over-age temporary appointments terminated.

Chief Shea was a member of the International Association of Fire Chiefs, the New England Association of Fire Chiefs, the Massachusetts Permanent Firemen's Association and the Fitchburg Firemen's Relief Association. He is survived by his wife, a daughter, three sons, four sisters and three brothers.

Albert Herring Dies

Albert "Pal" Herring, affectionately known as the "best little-town Fire Chief in America" and head of the Murphysboro, Ill., Fire Department for forty-six years, died at the age of 67 only a few hours after the city's annual ball, climaxing Fire Prevention Week. He had been ill for two years and in critical condition for nine weeks.

Murphysboro's "man of many jobs" as he was also known, worked in the coal mines when he was ten. Later, as

Chief Albert Herring

a grocer his hobby was fighting fire and he used to race the swanky Egyptian Fire Company, composed of Mobile and Ohio railroad shopmen, to every blaze. When the town council inaugurated the paid department forty-six years ago, Albert Herring was selected as chief. It was a good selection.

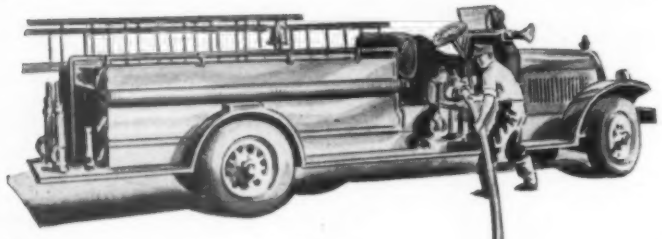
In his time, Chief Herring inaugurated many improvements, in fire control, one of them being the introduction of fire prevention into the schools. His Christmas parties for the kiddies brought him wide acclaim. He was never at a loss to perform some charitable act in his community.

Few men have occupied as many positions in fire service and local community organizations as Chief Herring. His identification with the jobs he held and his official associations became a chapter in his service record and are perhaps his best epitaph: Fire Chief, President of the Park Commission, Supervisor of Cemeteries, Electrical Inspector, Fire and Heating Inspector, head of the Fire Prevention Bureau, Charity Chairman, Chief of Western United Safety Team, Founder and Chief of the Egyptian Fire Fighters' Association (one of the earliest "working" mutual aid organizations), Vice-president of the Illinois Firemen's Association, member of the Western Electric Inspectors' Association, sole honorary member of the Pacific Fire Chief's Association, honorary member of the International Association of Fire Chiefs, Elk, Eagle, Town Santa Claus and wearer of numerous honors and 'decorations for never-failing attendance at fire service conventions.

In the death of Chief Herring not only Murphysboro but the nation's fire service loses an outstanding and faithful fireman and friend. Chief Herring was buried with full ceremonial honors. The City offices were closed in his respect and honor. Ritual services were conducted by the Illinois Firemen's Association. The pall bearers were old friends.

A TRUCK PUMPER IS USELESS

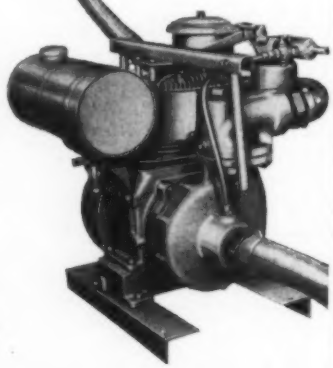
If it can't get water to the fire



AN enthusiastic owner of a Gorman-Rupp portable Fire Fighting pump wrote to us describing a bad fire in a small Ohio Town. Companies from six adjoining cities were on the job but none had been able to get any water to the fire. Quoting our correspondent:-

"When we arrived six fire companies were already there. We took our little booster pump to the river and then we hooked it up to our big pumper and ran two lines off of that. Did that baby throw water? You should have seen the crowd and heard them around there talking about our little pump."

THE DUAL FIRE FIGHTER



The Dual Fire Fighter is easily carried by two men -- it weighs only 155 pounds. Primed in from 15 to 30 seconds by means of a simple never failing exhaust priming device.
It is equally valuable in fighting fires direct when the big truck pumper is impracticable or unavailable.
It may also be used for dewatering purposes, thus saving the expensive truck pumper possible costly damage. Any damage done to the Dual Fire Fighter is quickly and cheaply repaired with common tools.

Write for our bulletin FD-3.
Some territory open for live distributors

THE GORMAN-RUPP COMPANY
BOWMAN STREET · MANSFIELD, OHIO

This is the Midwestern Combination Suit Thousands of Firemen are wearing:

See your Midwestern Manufacturing Company dealer for prices or write the factory.

The COAT

The "mackinaw coat" is a highly serviceable garment with flexible elastic inner sleeves; adjustable collar strap, detachable wool lining. Midwestern safety snaps, two outside pockets, 6" storm flap and many other good features. This Midwestern Combination Suit, made of Vanitex, the modern waterproof fabric, is sold separately or together.

Available!
REGULAR FIREMEN'S BOOTS

Regular Firemen's Boots are now available. ¾ length. Hundreds in use all over America. See your local Midwestern dealer or write the factory.

The PANTS

Midwestern Bunker Pants have detachable wool lining, which is held in place by snap buttons; rubberized fabric belt in lining; eight suspender buttons, two side and one hip pocket; safety snap on belt; reinforced adjustable belt; special vanitex fabrics; wide protecting flap; reinforced by rivets.

MACKINAW COATS ARE MANUFACTURED BY

MIDWESTERN MANUFACTURING CO.

MACKINAW, ILLINOIS

Dr. Otto Wagner Dead

Dr. Otto Wagner, a practicing physician of Elizabeth, N. J., for the last forty-two years and Fire Commissioner of the City for thirty-two years, died Oct. 22 at Elizabeth General Hospital after a long illness. He was 74 years old.

Born in Alsace-Lorraine, he came to this country in 1893 and was graduated from Cornell Medical College in 1903. Beginning practice in Elizabeth the following year, Wagner later served on the staff of three city hospitals and was a director of the Elizabeth Trust Company. He also was a member of the Board of Fire Commissioners under appointments of four mayors.

Dr. T. W. Kilmer Dead

Dr. Theron Wendell Kilmer, of 215 Hilton Avenue, Hempstead, N. Y., died after a month's illness, as a result of a cardiac condition and complications. Dr. Kilmer also had an office and home at 165 West 85th Street, New York, until five years ago. He had practiced medicine in New York since 1895.

Dr. Kilmer was an Honorary Chief of the Fire Department of Hempstead and had been associated with the New York Fire Department for many years. He was an ardent "fire fan." He had a fire alarm installed in his Hempstead home and responded to nearly every call. Well known to officers and men of the New York Fire Department, he often treated those who were injured in the line of duty. Many of the firemen brought their children to him for treatment as he was a specialist in diseases of children.

Dr. Kilmer was an active member of the famous "Cycle Club," composed of fire officers of the New York Department. He was also a member of the National Association of Police and Fire Surgeons.

Many friends attended his simple, but impressive funeral services held at the Cathedral of the Incarnation, Garden City, N. Y.

Fireman Killed in Action

Captain Frank Crabtree, of the Dayton, Ohio, Fire Department, and prominent in Local 136 of the International Association of Fire Fighters, died as a result of injuries received while fighting a three-alarm fire at Miller's Auction Company, that city, on September 7 last. He was operating on a ladder when in some way he lost his balance and fell to the ground, thirty feet below.

Captain Frank Crabtree

The captain was appointed fireman in 1929, promoted to lieutenant in 1939, and to captain in 1943. He is the first fireman to be killed in action in Dayton since the paid fire department was organized in 1864.

Troy New Paterson Chief

James J. Troy, formerly Deputy Chief, has been appointed head of the Paterson, N. J., Fire Department, to fill the vacancy created by the resignation of Thomas L. Coyle, Chief of the department since 1912.

At the same time, the fire-police board of the city promoted Battalion Chief Hobart Strathearn to the rank of Deputy Chief and made provision for a second position of deputy chief to be filled later. At present, the only candidate eligible for the new deputy post is Battalion Chief James A. Kennedy.

Chiefs Troy and Strathearn were sworn into office in the presence of former Chief Coyle, who heard himself extolled by municipal officials.

Chief Troy is a veteran of the first World War and was appointed to the fire department July 1, 1916, when Paterson adopted the two-platoon system. He enlisted in the Army in 1917

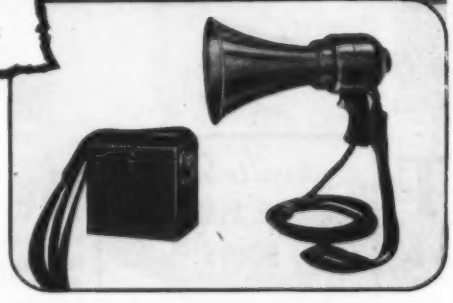
Super-Powered Portable
ELECTRIC MEGAPHONE

Saves Lives!
Controls Panic!
Directs Crowds!

Tool for Firefighters

A portable but powerful loud-speaker should be standard equipment for every fire department. It could assist the officer in charge in directing the efforts of his men. It could assist the police in controlling spectators. It might save many lives by enabling firemen and police to communicate with and to coach persons trapped in burning buildings.

from CHICAGO DAILY NEWS
Friday, June 7, 1946



Amplifies the Human Voice

PROJECTS

CLEAR SPEECH UP TO ½ MILE

Indispensable as standard equipment for fighting fires and directing orderly dispersal of crowds. Fire chiefs can direct operations of men on ladders or roofs, warn them of impending dangers, speak to and advise people who through lack of direction are lost or trapped. Beams the voice directly to the desired area.

Completely portable! Carries its own power! No wiring, no stringing of speakers, no headphones. Ready for instant use in emergencies. Just attach cable, press trigger switch . . . and normal speech voice is projected clearly and distinctly to a distance of one-half mile and more. Weighs only 11 pounds. Operates efficiently rain or shine. Sturdily constructed. Simple to operate. Fire departments will find this Portable Electric Megaphone a valuable addition to their fire-fighting equipment. Write for complete details, NOW!

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6525 North Clark Street • Chicago 26, Illinois

Scott Aviation Corporation
Announces
Bureau of Mines Approval
No. 1308
for
Scott Air-Pak

SCOTT AVIATION CORPORATION • LANCASTER, N. Y., U. S. A. • ESTABLISHED 1932

and in 1918 was wounded in the Argonne. He was discharged from the service in 1919 and re-entered the department in May of 1919. He was promoted to captain in May, 1921, and named battalion chief in 1938. On March 1, 1940, he was elevated to the post of deputy chief.

"Hobey" Strathearn, as he is known, like Troy, is a World War I veteran. He entered the department in 1922, topping the list of applicants with a perfect score of 100 per cent. He was named a captain in February, 1930, and promoted to the rank of battalion chief in July, 1940.

During World War I, Chief Strathearn entered the Navy at the age of seventeen. He was honorably discharged in 1919. He has been active in social, fraternal and fire service organization work.

Two Brockton Chiefs Retire

Nearly 800 friends, fellow-fire-fighters, "sparks" and city officials joined in paying tribute to two distinguished retired officials of the Brockton, Mass. Fire Department former Chief Frank F. Dickinson and former Deputy Chief John Murphy.

The ceremonial program included a banquet and presentation of gifts by Selden R. Allen, former Chief of the Brookline Fire Department, representing the International Association of Fire Chiefs.

Besides Mayor Downey and other local city officials, the speakers included Rev. David B. Matthews, STD; Dr. Bradford H. Pierce of Hanson, president of the Squanto Boy Scout council; Chief John W. O'Hearn of Watertown, representing the New England Association of Fire Chiefs; Congressman Wigglesworth; Rev. Lawrence P. Morrisoe of Kingston; Chief Eben Briggs of Duxbury, president of the Plymouth County Forest Wardens' Association, and a number of local and visiting chief officers.

Appointments and Elections

C. F. Updegrove, of Millerstown, Pa., was elected president of the Perry County Firemen's Association.

Stewart Crouse is Chief of the newly formed New Buffalo, Penn., Fire Company.

William Lindemann of Engine Company 1 was elected Chief of the Bogota, N. J., Volunteer Fire Department. Frank Mier is Assistant Chief.

Marvin Eklund, formerly Assistant Chief, has been advanced to the post of Chief of the Carthage, S. D., Fire Department.

William E. Dunlavy was appointed Chief of the Belleville, N. J., Fire Department succeeding Robert A. Reid, who retired July 1, last. The new head of the organization has been a member of the paid department since it was organized in 1923.

In Gloucester, Mass., Fire Captain Henry Hilton has been advanced to Deputy Fire Chief. He is a veteran of thirty-one years in the department.

Paul Morris has been named as Fire Chief of the Gravity, Iowa, Fire Department. Harry Burmeister is the new Assistant Chief.

Gann L. Nalley has been named Chief of the Little Rock Fire Department following an unexpected shakeup in the organization which saw the reduction of the then Chief to second assistant chief.

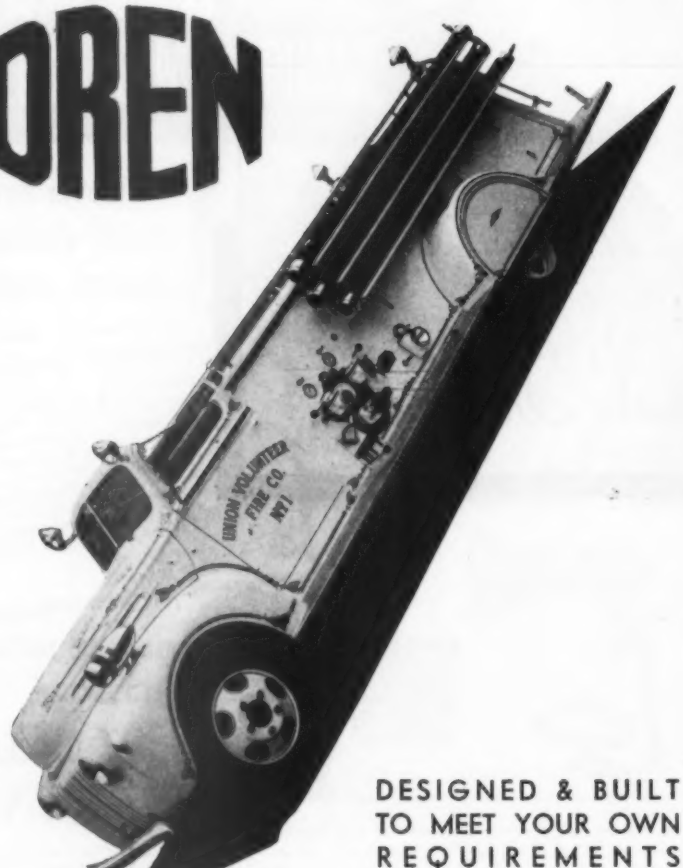
Chief Turner, whom Chief Nalley succeeds, became head of the department in July last, succeeding Joseph Carmichael, retired, but following reports of differences in the department, the changes were ordered through the Civil Service Commission.

Other shifts resulting from the action are: Arthur D. Williams advanced from second to first assistant chief; and Sam H. Early, serving temporarily as third assistant and inspector, certified to that office.

Chief Nalley joined the department in January, 1930; in 1938 he became secretary of the department and after a short service in that office he was named captain, later being advanced to third assistant chief and inspector. Chief Turner has been with the department since 1926.

Fire Captain John R. Cremen of the Lower Lake Fire Department, Lower Lake, Lake County, Calif., was appointed Chief of the department by the Board of Fire Commissioners. He has been with the Lower Lake department eight years and is a member of the In-

OREN



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TO MEET YOUR OWN
REQUIREMENTS

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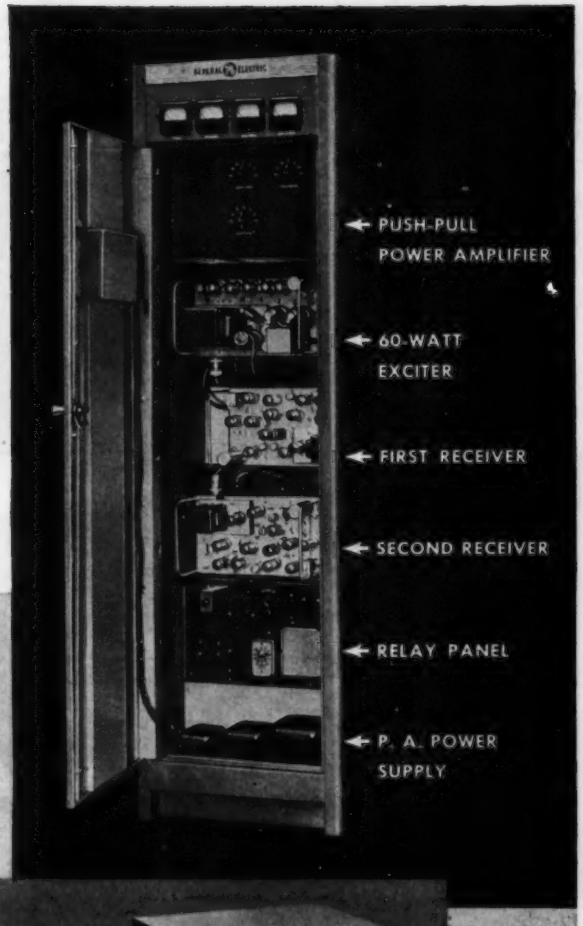
GIVES YOU FIRE MASTERY WITH THE 250-D FM STATION COMBINATION



FIVE GOOD REASONS WHY THE G-E 250-D FM STATION COMBINATION WILL HELP YOU

- Instant Contact Means Instantaneous Results
- Gets Action—When and Where You Want It
- Avoids Costly and Dangerous Delays
- Coordinates Activities to Produce Better Teamwork
- Easy, Efficient Operation

CONVENIENT HANG-UP TYPE MICROPHONE

LOCAL CONTROL UNIT FOR THE 250-D COMBINATION

and TEN GOOD REASONS TO BUY THE G-E 250-D FM STATION COMBINATION

- Local control unit furnished for operation adjacent to the transmitter, providing greater flexibility and normal, on-the-spot operation.
- Provision for operation from a remote point over a single pair telephone line.
- Silver-plated, hermetically-sealed transmitter crystal and hermetically-sealed receiver crystal.
- Vertical construction for easier maintenance and better ventilation.
- No dangerous voltages exposed when doors are opened. Tuning can be done while the equipment is operating.
- Standard, easy-to-obtain tubes used throughout.
- All sub-chassis bases protected by easily removable dust covers.
- Heavy-gauge steel construction with opalescent-blue, baked enamel Dimenso finish. Stainless steel trim.
- Doors lock front and back with positive action handles.
- Double outlet convenience receptacle with 110 volt A. C., for servicing.

G-E radio engineers are located in principal cities. For complete information and assistance in planning your radio system, call or write your nearest General Electric office or the Electronics Department, General Electric Company, Syracuse 1, New York.

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ternational Association of Fire Chiefs, Pacific Association of Fire Chiefs, Northern California Fire Chiefs' Association, the California State Firemen's Association and the Northern California Firemen's Association and the Lake County Firemen's Association.

Paul A. Spener of Carroll, Ia., was named president of the Iowa State Firemen's Association. Dean Rogers, Corning, Ia.; M. M. Babcock of Eldora, and J. B. Willey, Chief of the Mount Ayr, Ia. Fire Department were named first, second and third vice-presidents, respectively.

Nicholas Van Houten, for fifteen years a member of the East Rutherford, N. J., Fire Department, has been named to head that organization. Albert Gillies was elected First Assistant and William Bogart, Second Assistant.

Frank McKim, World War II veteran, was appointed Chief of the Alpena, Mich., Fire Department to fill the vacancy resulting from the resignation of former Fire Chief R .E. Wilson, who had been a member of the department since 1908.

Jerry Jerow, a member of the Escanaba, Mich., Fire Department for twenty-six years was appointed Fire Chief to fill the vacancy caused by the retirement of Avid Johnson. The new Chief was at one time Assistant Chief and Captain of the department.

Ed Busching has been elected Fire Chief of the Valley City, N. D., Fire Department following a rift between the organization and the mayor's office during which Fire Chief I. V. Severson and others of the department handed in their resignations.

Retirements

Fire Chief Arvid Johnson retired October 1 as head of the Escanaba, Mich., Fire Department after a record of forty-three years public service.

Dave Gibson has resigned as Chief of the Richmond, Mo., Fire Department. ment.

Fire Chief Frank A. Northcutt, of the Covington, Ky., Fire Department, retired October 1, after fifteen years as head of the fire force. He had been on the department twenty-eight years. His retirement is attributed to ill health. Walter Salyers is at present serving as Acting Chief.

Obituaries

Chief Fred Maxwell-Smith, affectionately known as Max Smith, since 1928 head of the South Porcupine Fire Brigade, South Porcupine, Ont., Canada, who died recently, was active in Dominion fire service circles. He was President of the Dominion Association of Fire Chefs in 1939, and prior to that headed the Temiskaming Firemen's Association.

Fire chiefs from most of the centers in Northern Ontario and Northern Quebec attended the funeral services on October 2. Pallbearers were members of the South Porcupine Fire Brigade.

Chief Frank Hummelt Resigns

Frank Hummelt, Chief of the Fire Department at Quincy, Ill., has resigned and his place has been taken by Russell Schaefer, who has been First Assistant Chief. Hummelt, a member of the department 22 years, retired on a pension. The resignation became effective September 16. Hummelt gave as his reason for leaving the department, "lack of cooperation."

Hummelt's resignation was to have taken effect on July 31, but he continued in service because Mayor E. J. Schneidman was killed in the Hotel LaSalle fire in Chicago on June 5. Mayor Schneidman had gone to Chicago with James O. Potter, public engineer; Alderman Martin Heinen and Emory Sallstrom, executive secretary of the Federal Housing Authority, to consult FHA authorities about G. I. housing in Quincy. All four lost their lives in the fire.

After Alderman William Sass was appointed acting mayor, Hummelt again tendered his resignation, and despite efforts to have him remain at the head of the department, he steadfastly refused.

Chief Hummelt rose in the ranks from private, advancing to fourth assistant, second assistant and first assistant chief. His first appointment was a driver of a horse drawn hose cart. Quincy was the first city in Illinois to purchase a piece of motor apparatus and Hummelt was named one of the drivers of a combination chemical and hose truck. The city was also the first municipality in Illinois to completely motorize the department. With the arrival of an 85-foot motorized aerial, Hummelt was transferred to it as a driver. Chief Schaefer

A cigarette . . . a match or short circuit can become a big fire. When or where it will strike no one knows because

FIRE strikes swiftly!

and every minute counts because the element of speculation is eliminated and you are assured of unfailing hose performance when you have Quaker's Modern Municipal Fire Hose with Easy Fold Construction.

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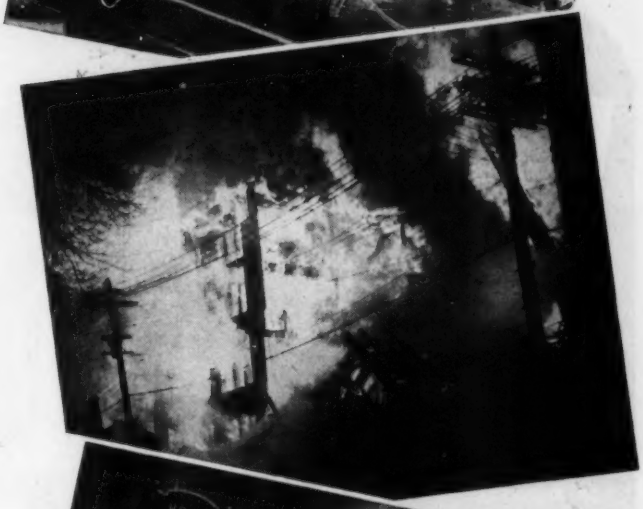
Let's Stop these big losses!



Analysis by the National Fire Protection Association of large-loss fires in 1945 and those already reported for 1946, indicates that in most cases *the fire had gained such headway when discovered that nothing much could be done to control the loss, despite valiant efforts by the fire department.*

These big losses, resulting from belated discovery and delayed alarms, can be most effectively prevented by *automatic* detection and reporting of fires in those vital first few minutes when usually the flames can be easily and quickly controlled.

A.D.T. provides this protection in unsprinklered properties through Aero Automatic Fire Detecting and Alarm Service and in sprinklered properties through Sprinkler Supervisory and Waterflow Alarm Service, which automatically detect the outbreak of fire and summon fire fighting forces immediately and accurately.

Without obligation we'll be glad to show you how these and other A.D.T. Services can help you solve your particular protection problems. Write us...TODAY.

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CENTRAL STATION OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES

A·D·T

Electric Protection Services
AGAINST FIRE · BURGLARY · HOLDUP
A NATION-WIDE ORGANIZATION

has been a member of the department 11 years and also rose from a private to first assistant chief. EARL NOLAN.

Chief T. D. Blake Retires

Fire Chief Thomas D. Blake, 64, head of the Rockford, Ill., department for 24 of his 44 years as a fireman, was retired November 1.

His towering, white-thatched figure became a symbol of firefighting during his long tenure. The department's youngest captain and youngest chief when he was appointed, "Tom" Blake was the fifth chief since firemen went on a paid basis in 1880.

Blake, who never has missed a convention of the International Association of Fire Chiefs since he was appointed in 1922, had served the longest of any of the five chiefs.

The veteran firefighter joined the department in 1903 and watched the change from horse-drawn rigs to mechanical power. A shade under 20 when he was appointed a pipeman, he won his captaincy three year later, became the first captain of a hook and ladder company in 1910, and was named chief in 1922 when he was 40 years old.

A stern disciplinarian but fair with his men, Chief Blake returned to duty Sept. 1 after a bout with a heart attack laid him low last March. He came back to give his two assistants, Ralph Lund and Charles E. Strom, their vacations before he announced his retirement. His resignation as Chief would not have been compulsory until July 21, 1947, when he reached 65.

When Blake was appointed Chief the Rockford department comprised 27 men, four houses, and nine pieces of equipment. Today, there are 90 men, seven houses, and 12 pieces of apparatus, including a hook and ladder and two city service trucks.

Even during his convalescence Blake was fighting for more men and more equipment to give adequate protection to Rockford which grew during the war years from 83,000 to 120,000.

Successor to Blake has not been determined. Strom probably will be named acting chief until a new chief is named. B. J. GARSON.

Built to exacting requirements—to fire department specifications. . . . Designed to stand up under the hard usage and difficult conditions a Fire Department Portable has to meet! In service with leading fire departments, these rugged 1500 watt Units have *proved* themselves capable of meeting every emergency.

Dependable. Quick-starting 4-cycle engine. Positive lubrication.

Start it and forget it! Automatic voltage regulation under all loads. No adjusting necessary. No fussing to mix gasoline and oil.

Compact. An easy load for two men.

Larger and smaller sizes available. Write for further information.

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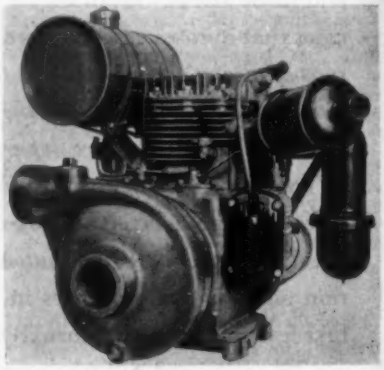
News of the Manufacturers

(*Continued from page* 832)

New Portable Pump

The Empco Enginpump is a newly developed product by Maryland Products Company—manufacturer of gasoline engine driven centrifugal pumps—which feature only one moving part.



Empco Enginpump

The close connected design completely eliminates gears, belts, chains and couplings. There are no relief or by-pass valves required.

The Enginpump has only one moving part, the impeller, which is rigidly keyed to the engine shaft and revolves within the pump casing with large clearances.

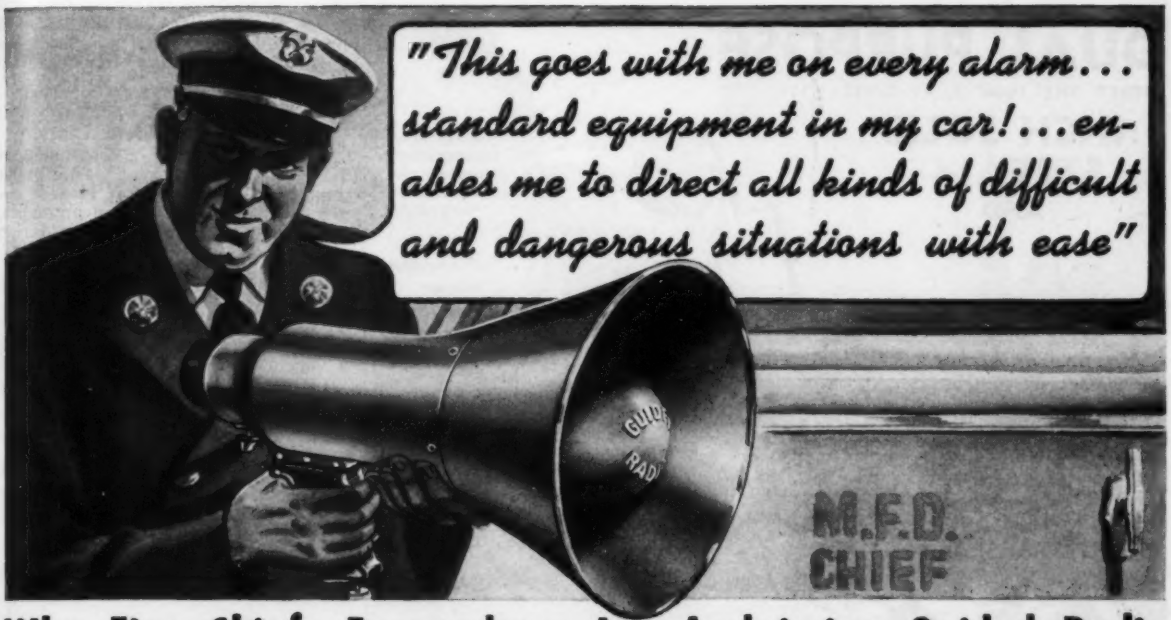
The volute casing contains both suction and discharge nozzles. Its removal gives complete access to the pump impeller. The discharge nozzle may be turned to any of four positions. Convenient drain plugs are provided at all positions.

Variable capacity is obtained by the inherent design of the "Centrifugal" Oil Enginpump which permits regulation of flow from 0 g.p.m. to maximum capacity at the will of the operator. There are no relief or by-pass valves necessary.

The Enginpump weighs 105 lb. complete. The complete unit measures 18" x 19". The unit delivers 25 g.p.m. at 60 pounds pressure; 60 g.p.m. at 50 pounds, and 90 g.p.m. at 40 pounds.

Rutledge Joins General Detroit Co.

E. A. Warren, Vice President in Charge of Sales, has announced the appointment of Gail Rutledge as Midwestern Regional Sales Manager for The General Detroit Corp. Rutledge will be located in the Corporation's Chicago branch office, 607 West Wash-


"This goes with me on every alarm... standard equipment in my car!...enables me to direct all kinds of difficult and dangerous situations with ease"
M.F.D.
CHIEF

Why Fire Chiefs Everywhere Are Acclaiming Guided Radio Portable Electric Megaphone* As Standard Equipment

It enables them to direct men on ladders, on roofs, even on smoke-filled floors inside buildings—not only directing all their activities more efficiently and with ease but giving them all manner of instant warnings of grave dangers which cannot be detected in time to get men to safety.

Hundreds of firemen are killed each year because they cannot hear commands to "Get out!" Unaided, the human voice cannot rise above the din and turmoil of a fire. Guided Radio Electric Megaphone enables the Chief to speak instantly to any man over distances of a mile or more.

*Manufactured under U. S. Patents and Applications

Guided Radio *Electric Megaphone*

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DEMONSTRATION COUPON 11-11

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Please have your representative give us a demonstration of your Portable Electric Megaphone.

Name.....

Address.....

City.....

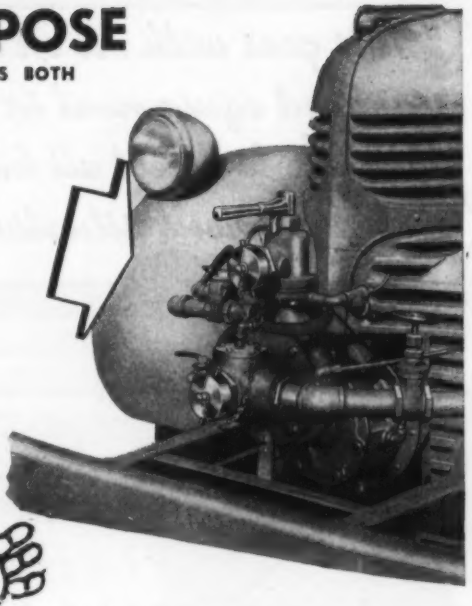
DUAL PURPOSE

HERE'S THE PUMP THAT GIVES BOTH

1 INCH SOLID STREAM AND FOG

IT'S 5 WAYS BETTER

Barton-American's Gear Driven Front Mounted Centrifugal Fire Pump can be installed in a few hours' time.



A Bear for Work

Delivers 60-90 GPM at 600 lbs. pressure with FOG nozzle and 200 GPM through 2½" line with 1" SOLID STREAM nozzle . . . at engine speeds equal to only 40 mph. Front mounted construction leaves room for 1000 feet of 2½" hose plus 500 gallon booster tank. Pumps dirty water with minimum loss of efficiency.

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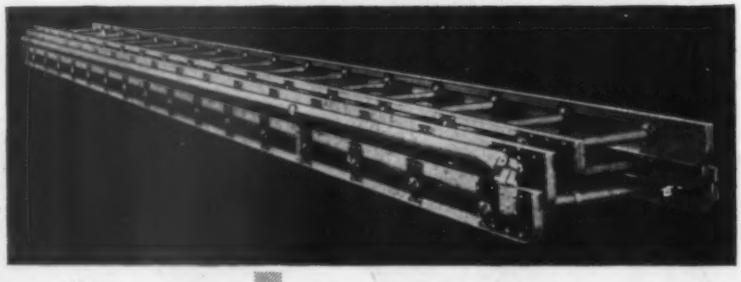
YOU RECEIVE *Quality*

WITH EVERY ALUMINUM LADDER



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Write for information on standard and custom built Aluminum Ladders.

Combined to guarantee your safety and satisfaction are these Aluminum Ladder features:

- Locks operate automatically at any desired point during ladder extension.
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- Extension type 3EL, 65-foot ladder can easily be raised by four men and one supervisor.

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ington Blvd., Chicago. In his new position he will supervise sales in the States of Illinois, Wisconsin, Minnesota, and South Dakota.

Plexiglas in Lantern Lens

A lantern featuring a lens made of Plexiglas, the transparent plastic manufactured by the Rohm & Haas Company, Philadelphia, has been announced by the Delta Electric Company, Marion,

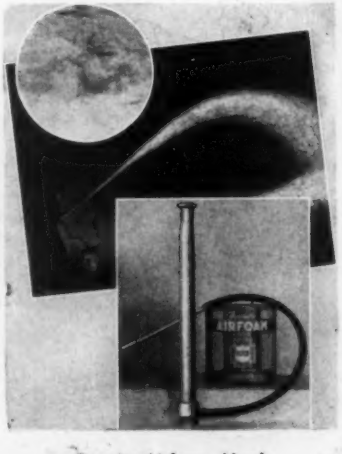
Lantern with Plexiglas Lens

Indiana. The lantern is the same type used by the U. S. Navy for emergency lighting equipment.

The moulded Plexiglas lens is held in place by removable screws. It has a light transmission value equal to that of fine optical glass while its shatter resistant quality offers added protection against possible breakage resulting from rough useage. The plastic lens weighs only one-half as much as the glass lens formerly used.

New Foamite Nozzle

The Foamite Airfoam - Generating Nozzle—a new foam-making fire-fighting nozzle of novel design, has been in-



Foamite-Airfoam Nozzle

troduced by American-LaFrance-Foamite Corporation, Elmira, N. Y.

The Foamite airfoam-generating nozzle mechanically creates airfoam through a scientific mixing of water, air and Foamite airfoam liquid within the nozzle, and discharges the combined ingredients as Foamite airfoam through the nozzle tip.

The Nozzle is 2½-inches in diameter

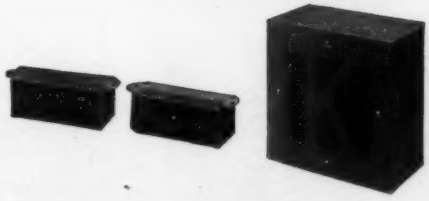
KAAR INSTANT HEATING MOBILE FM

Now available! An FM Radiotelephone with a truly NATURAL voice quality!

New KAAR FM radiotelephones offer an improvement in tone quality which is suprising to anyone who has had previous experience with mobile FM equipment. The over-all audio frequency response through the KAAR transmitter and receiver is actually within plus or minus 5 decibels from 200 to 3500 cycles! (See graph below.) This results in vastly better voice quality, and greatly improved intelligibility. In fact, there is appreciable improvement even when the FM-39X receiver or one of the KAAR FM transmitters is employed in a composite installation.

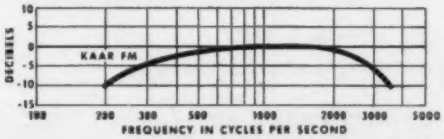
KAAR FM transmitters are equipped with instant-heating tubes, thus making it practical to operate these 50 and 100 watt units from the standard 6 volt ignition battery without changing the generator. Inasmuch as standby current is zero, in typical emergency service the KAAR FM-50X (50 watts) uses only 4% of the battery current required for conventional 30 watt transmitters. Battery drain for the KAAR FM-100X (100 watts) is comparably low.

For full information on new KAAR FM radiotelephones, write today for Bulletin No. 24A-46.



KAAR LOUD SPEAKER, remote controls for transmitter and receiver (illustrated above) and the famous Type 4-C push-to-talk microphone are among the accessories furnished with the equipment.

IMPROVED OVER-ALL FREQUENCY RESPONSE THROUGH KAAR FM TRANSMITTER AND RECEIVER



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KAAR ENGINEERING CO

For the best in Firemen's Boots

LOOK FOR THE TOP NOTCH SIREN LABEL

This is your guarantee of foot comfort, safety, long wear

Sold only through authorized distributors

A PRODUCT OF

BEACON FALLS RUBBER FOOTWEAR

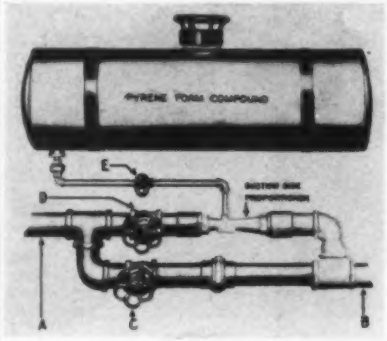
BEACON FALLS, CONNECTICUT

at the widest part and is of the dual purpose type; it can be operated for either a foam stream or clear water stream at the option of the operator by simply removing the pick-up tube from the Foamite Airfoam Liquid.

Air Foam System for Fire Trucks

Motor fire apparatus having a booster water tank can be equipped with an air foam system that is simple, compact and of a large foam capacity, according to the Pyrene Manufacturing Company, Newark, N. J.

By adding a tank for Pyrene foam compound, a proportioner, connecting



Air Foam System

piping and a PP-25-S Pyrene foam playpipe, thousands of gallons of foam can be produced for extra-hazardous flammable liquid fires. The system is put into operation by opening two valves and attaching playpipe to hose. A pumper with a 500 gallon water tank and 25 gallon foam compound tank will produce approximately 8,750 gallons of foam using 40 g.p.m. of water, 2 g.p.m. of foam compound and operating for 12½ minutes. Operation can continue indefinitely if the supplies of water and foam compound can be replenished.

The installation as illustrated can be made by any fire department. Piping A is connected to booster water tank; piping B to suction side of pump. To operate the foam system, close valve C and open valves D and E. To discharge plain water, close valves D and E and open Valve C.

California Firemen to Meet

. Next year's convention of the California State Firemen's Association will be held in Lake County, it was decided at the last meeting of the Association in Long Beach, Calif. The Women's Auxiliary of the Association will hold their convention at the same time, and place.

It is said this marks the first time the Association has held a convention outside the large cities of the State. The action was taken following a spirited campaign by Lake County fire officials including Chief Geo. Turnbull, Chief Frank Hoberg of Seiglers Springs, Chief Phil Ellis of Pine Summit, first assistant chief Gus Nelson of Hoberg, and Chief Clarence Prather of Adams Spring, and members of the State Firemen's Association to bring the 1947 meeting to their area. The date of the convention will be announced later.

Better

FIRE STATION DESIGN

with

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THE AIR-CONDITIONING

FIRE HOSE DRYER

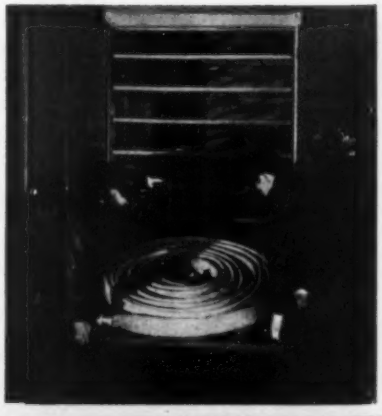
In eliminating the unsightly hose tower and cumbersome rack and the "dead" space they involve your architect can plan a really attractive station of functional design. The thousands of dollars saved in construction costs could provide a lot of other needed equipment. DON'T give your modern fire dept. an old-fashioned home.

Better

HOSE DRYING

Chiefs and firemen prefer this modern ELECTRO-MECHANICAL DRYER because it: (1) does a better job in a fraction of the time; (2) saves most of the hard work; (3) takes up so little floor space; (4) is ideal for hose storage; (5) lessens need for large hose reserves; (6) dries clothing as well as hose.

CIRCUL-AIR is ideal for *fire stations of any size* . . . indeed many larger cities have re-ordered for additional houses after initial installations have proved it the fastest, easiest and most economical drying medium.



THE CIRCUL-AIR CORPORATION

575 East Milwaukee Street

DETROIT 2 MICHIGAN

Fire Buff Clubs

(*Continued from page 826*)

of all fire fans groups. With the return of military and other war related personnel to normal civilian pursuits, the bell, box and buff bourgeoisie are again in clover with the knowledge that they are available for come-what-may if and when a fire is nigh.

Some of the groups function in a quasi official capacity, either as couriers; first-aid; welfare workers, coffee and sandwich stewards; press liaison; photographers, fire preventionists, etc. Some of the clubs have a constitution and by-laws; some others have a pledge or oath of office.

A thumb-nail sketch of the outfits thus far recorded would look like this on a roll call by States:

San Francisco, Cal.—Phoenix Society, 1931; 25 members; name symbolic of a city (like the phoenix bird) that rose from its own ashes, bigger and better. Society is official unit of American Red Cross Disaster Relief Committee. Meets monthly. Robert H. Schaefer, pres.; H. D. "Jack" Hart, sec'y., Flood Bldg., San Francisco 2.

Washington, D. C.—Friendship Fire Assn., 1940; 20 members; name derived from George Washington's own fire company in Alexandria in 1774; Lester H. Steinem, Esq., pres.; Roy A. Wiseman, sec'y., 2311 Huidekoper Pl., Wash. 7.

Lexington, Ky.—Box 212 Associates; 12 members; name derived from Box 212 at the old Insane Asylum, now known as Eastern State Hospital. Lt. Col. John L. Carter was Chief of the club until he went to war. Further details lacking. Address Lexington 15, Ky.

Boston, Mass.—Box 52 Assn. Inc.; Nov. 9, 1912; 60 members; originally 52. Box 52 struck for "Great Boston Fire" on Nov. 9 and 10, 1872; also conflagrations of November 28, 1889 and March 10, 1893. Meets monthly in the Parker House. One member killed in action in W. W. II; P. Hildreth Parker, pres.; Frank D. Harrington, sec'y. Lowell St., Brookline.

Boston, Mass.—Boston Sparks Assn.; 1938; 75 members; name selected by referendum; meets semi-monthly; Wm. L. Ross, pres.; Wm. A. Grouse, sec'y. 112 Columbia St., Brookline.

Worcester, Mass.—Box 4 Associates Inc.; 1921; 50 active and 50 associates; name from box sounded for the biggest fire Worcester ever had; meets monthly; Howard W. Robbins, pres.; Arthur S. Hill, sec'y. 12 Walnut Dr.

Bay City, Mich.—Box 65 Club; 1941; 17 members; Box 65 pulled for a great fire which did much damage in the early lumber days; meets monthly in the Chief's Office; Ted Martin, pres.; Harry Trahan, sec'y. Professional Pharmacy, Davidson Bldg.

Detroit, Mich.—Box 12 Associates; 1926; 25 members; name derived from lowest box number; meets monthly; Paxton Mendelssohn, pres.; Harry Shearer, sec'y. 1918 Buhl Bldg., Detroit 26.

Lansing, Mich.—Box 23 Associates; 1937; 15 members; name taken from box used for Hotel Kerns fire in 1934; meets monthly in central fire station; Claude Teachout, pres.; Matthew Rapp, sec'y. 1255 So. Grand Ave.

St. Louis, Mo.—Box 8 Club; 1942; 50 members; name taken from signal number used to shift equipment to uncovered areas due to multiple alarm fire;

OPERATE TOOLS, PUMPS, BLOWERS, LIGHTS WITH ONAN POWER PLANTS

Ready for instant use, compact, lightweight Onan Electric Plants provide dependable power *when you need it and where you need it*. Can be easily carried into trouble areas. Fit into small space for truck installations.

High-tension ignition provides a hot spark for easy starting.

Four Twistlock receptacles permit direct plug-in of lights and motor-driven tools. Guarded pilot light gives ample illumination for operating.

Onan plants for fire-department applications are available in capacities from 350 to 4000 watts, powered by one and two-cylinder, 4-cycle air-cooled engines.

ONAN ELECTRIC PLANTS are available in many sizes and models. **ALTERNATING CURRENT:** 350 to 35,000 watts in all standard voltages and frequencies. **DIRECT CURRENT:** 600 to 10,000 watts, 115 and 230 volts. **BATTERY CHARGERS:** 500 to 3,500 watts; 6, 12, 24, 32 volts.

Plant shown is Model 15 *DL*-14, 1500 *Watts*, 115 - *Volt D. C.*

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THE NEW LOW PRICED
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MODEL 158

NOW AVAILABLE FROM STOCK—ADAPTABLE TO ANY REDUCED BUDGET

FEATURES

- Less expensive operation than dry cells.
- Free use of hands. Light carries conveniently on shoulder strap.
- Positive "Non-spill" construction.
- Light can be focused and directed as desired.
- Weighs only 92 ozs. complete.
- Simple to charge and water. No need to take lamp apart.
- Low price and operating cost make Wheat adaptable to any reduced budget.

2,500 FOOT BEAM
25,000 CANDLE POWER
1,000 HOURS OPERATION

KOEHLER MFG. CO.
MARLBORO, MASSACHUSETTS

meets 2 P.M. on second Saturday of odd numbered months and 8 P.M. on second Friday of even numbered months; William Dunn, pres.; Carl Diemer, sec'y. 6823 Leona, St. Louis, Mo.

Five Clubs in New York City

Brooklyn, N. Y.—The 7-7 Club; 1945; 25 members; 7-7 is the preliminary signal to identify Brooklyn alarms and signals when sounded in other boroughs of the City; meets monthly; all members were in F. D. E. A. C.; Cyrus A. Curtis, pres.; George Holder, sec'y. 788-a Union St., Brooklyn 15.

Brooklyn, N. Y.—The 255 Club; 1941; 40 members; all F. D. E. A. C. men with Eng. 255 or Ladder 157 in Flatbush. Meets semi-monthly. Members act as purveyors of coffee and food when the N. Y. F. D. Field Kitchen rolls to Brooklyn on third alarms. Harold E. Graham, pres.; Arthur Anderson, sec'y. 1345 Rogers Avenue, Brooklyn 10.

New York—Fire Bell Club; 1939; 75 members; meets monthly; Joseph F. Hirschmann, pres.; Louis Sanford, sec'y. 119 West 33rd St., New York 1.

New York—Firemen's Cycle Club; not a buff's club but half of a hundred members are; other half active in or retired by N. Y. F. D.; organized 50 years ago to stimulate bicycle riding; oldest organization of its kind in the world; members rode bikes to fires; roster of members is "mysterious" which is the middle name of the club "janitor" Dr. Harry M. Archer, Deputy Commissioner. Meets monthly in the home of the "janitor" but not during summer; Frank Murphy, Act. Chief of Dept. is pres.; Dr. Herman L. Reis, sec'y., 47 West 85th St., New York 24.

New York—3rd Alarm Association; 1945; 50 members; by-product of the 4th and 5th Div., F. D. E. A. C. embracing Yorkville, Manhattanville and Washington Heights. Members dispense coffee and food from the N. Y. F. D. Field Kitchen at 3rd alarms in Manhattan; R. H. Marx, pres.; A. M. Kahn, sec'y., 1165 Park Ave., New York 28.

Ohio Has Three

Dayton, Ohio—Box 7 Associates; 1929; 18 members; box was used for Dayton's biggest fire; since new signal system was installed, the original Box 7 is now the club's prize possession. Members wear replica badges with "7"; meets monthly; Chas. A. Miller of J. R. Woodhull Co., pres.; Robert C. Kohnle, sec'y., 216 So. Torrance St., Dayton 3.

Cincinnati, Ohio—Box 13 Associates Inc.; 15 members; name derived from box with largest fires; more extra alarms and largest life and dollar loss in the city; meets monthly; R. E. Morrison, pres.; Al. M. Boex, sec'y., 13 Arcadia Pl.

Springfield, Ohio—Box 27; 1935; 8 members; name from largest fire in the city; members have a fireman's badge with "27"; meets monthly; C. H. Bray, pres.; P. G. Uhlmann, sec'y., c/o Ohio Edison Co.

Philadelphia, Pa.—Box 1776 Assn.; 1945; 13 members; name taken from the number of the alarm box in Independence Hall; Albert H. Redles, pres., 1612 East Cardeza St., Phila. 19; Dr. Robert C. Wiltbank, sec'y., 6 Oak Lane, Upper Darby, Pa.

ACME FULL-VISION "FD" GAS MASKS
give you these 3 exclusive features!

No other gas mask for use in fire fighting combines the performance features provided by the Acme Type FD All-Purpose Mask. Here are just three of the reasons why fire departments everywhere have standardized on Acme.

1. GREATER AREA OF VISION
Acme's large, clear, non-distorted lenses assure greater vision than any other—full downward vision, too.

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This exclusive feature limits the amount of carbon dioxide that wearer rebreathes. An extra safety factor.

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The FD cannister protects against smokes, fumes, dusts, mists and gases. Acme pioneered in filtering smokes and the FD cannister is so effective it will eliminate even cigarette smoke.

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Write for free instructions on how to make your present Acme equipment the easiest to adjust and release.

ACME PROTECTION EQUIPMENT CO.
3037 West Lake Street
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McCarthy Heads Up Hotel Protection

John J. McCarthy, who retired last Christmas eve as Assistant Chief-In-Command of the New York Fire Department, has been appointed Fire Protection Consultant to the New York State Hotel Association. Chief McCarthy's jurisdiction extends from the Canadian border to Staten Island. He is ideally equipped by education and experience for such responsibility. At the time he was appointed a Fireman 33 years ago, he was then No. 1 on the eligible list for Fire Prevention Inspector. If the hotel managers will cooperate and the hotel personnel will obediently adhere to Chief McCarthy's regulations and practices, the hotel industry will be helping itself.

Chief McCarthy will serve as advisor and field inspection supervisor to the State Hotel Association, which includes in its membership 600 of the leading hotels in the Empire State. Appointment of Mr. McCarthy in this capacity constitutes the first step ever taken by the hotels of New York State to serve the public in an organized fire safety campaign.

Chief McCarthy has had 32 years as a practical fireman and is an authority on fire engineering. As part of his functions to advise the member hotels of the State Hotel Association on fire prevention, he will issue a monthly bulletin giving advice on hotel fire safety and information on the latest devices for fire prevention.

During World War I Chief McCarthy was Fire Marshal of the New York Port of Embarkation as a First Lieutenant in the U. S. Army. In 1925, he revamped the New York Fire Department's book of rules and regulations. Among his other accomplishments was the introduction of the "McCarthy Disc", a portable target for identifying at a glance a fire hydrant that is out of order, and the creation of a mobile laboratory for detection and analysis of poisonous smoke and fumes. He has written a number of manuals and popular books on the science of fighting fire and founded the New York Fire Department's magazine "W-N-Y-F". He was also responsible, in 1926, for the adoption of a modern uniform for the New York Fire Department to replace the livery then being worn, which had been copied from that of the cavalry of the Union Army when the Fire Department was organized in 1865.

During World War II, in addition to commanding the fire fighting force of New York City, he organized the civilian fire defense activities which recruited 56,000 auxiliary firemen.

JERRY DALY

Questions and Answers

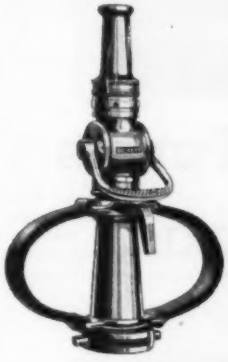
(*Continued from page* 835)

siamesed into a 1¼-inch tip at 40 pounds nozzle pressure?

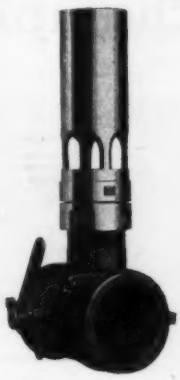
What is the friction loss in a 600-foot parallel stretch of 2½-inch hose siamesed into a 1¼-inch nozzle at 80 pounds nozzle pressure? H. F. W.

Answer: The siamesing of two lines is the bringing of two lines into one. The two lines may terminate in a deluge set or other pipe, or they may lead into

How to make it hot for fires



No. 900
Shut-off Nozzle



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Chief's Car
Whistle

No. 925
Siamese Gates

Every item added to your Buckeye complement steps up efficiency because each is a precisely engineered and carefully constructed piece of mechanism designed to do a specific job *best*. Shown here are a few—get details about the Buckeye line in the catalog which is yours for the asking.

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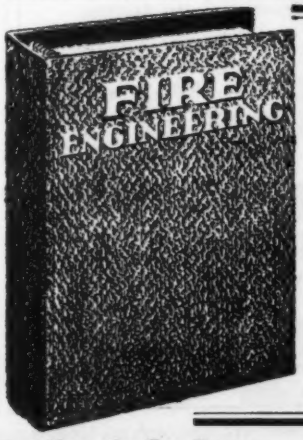

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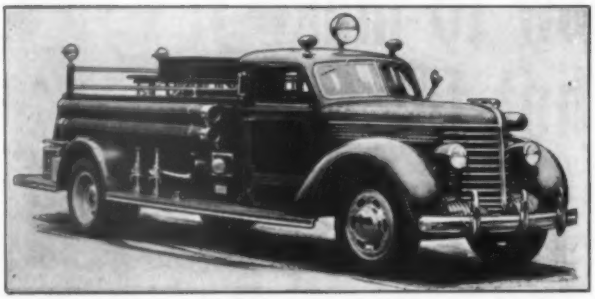
Champion Fire Apparatus



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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of Fire Engineering, published Monthly at New York, N. Y., for October 1, 1946.

State of New York } ss.
County of New York }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared I. H. Case, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the Fire Engineering, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Case-Shepperd-Mann Publishing Corp., 24 W. 40th St., New York 18, N. Y.; Editor, Fred Shepperd, 24 W. 40th St., New York 18, N. Y.; Managing Editor, Fred Shepperd, 24 W. 40th St., New York 18, N. Y.; Business Manager, I. H. Case, 24 W. 40th St., New York 18, N. Y.

2. That the owner is: Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y.; I. H. Case, 24 West 40th St., New York 18, N. Y.; Fred Shepperd, 24 West 40th St., New York 18, N. Y.; Karl M. Mann, 24 West 40th St., New York 18, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

I. H. CASE, Business Manager

Sworn to and subscribed before me this 5th day of September, 1946.
(SEAL.) WILLIAM H. TOPHAM
(My commission expires March 30, 1947.)

HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO

SOME WORDS FOOL YOU

like

RAISE (to erect) **RAZE** (to destroy)

BUT

WOOSTER BRASS always means the BEST in fire equipment supplies.

THE WOOSTER BRASS CO.

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When you specify products bearing the TRUMPET trademark, you can SAVE and BANK on SAFETY.

a single line of hose, which may be of any length, and fitted with a nozzle In either case, the two lines are siamesed.

On the other hand, when a single line of hose is branched into two lines, such as a 2½-inch line feeding two 1½-inch lines, the line is said to be wyed.

The friction loss in a 400-foot parallel stretch of 2½-inch hose siamesed into 1¼-inch tip at 40 pounds nozzle pressure is 23.2 pounds approximately.

The friction loss in 600 feet of parallel lines siamesed into a 1¼-inch tip at 80 pounds nozzle pressure is 64.2 pounds.

New York Fire Budget

The budget of the New York Fire Department for the fiscal year beginning July 1, 1946, provides a total of $48,088,453.68 for operating expenses, with an added $2,332,034.00 in the Capital Budget for permanent improvements.

The operating budget allows a quota of 10,352 members of the Uniformed Force and 841 civilian employees. The quotas, ranks and salaries of the Uniformed Force are:

1	Chief of Department	$12,500
4	Assistant Chiefs of Department	7,920-9,420
6	Deputy Chiefs in Charge	7,270-7,670
44	Chiefs of Division	6,720
128	Chiefs of Battalion	5,720
25	Acting Chiefs of Battalion (Captains)	4,920
1	Captain	5,420
364	Captains	4,920
969	Lieutenants	4,320
101	Engineers	3,820
40	Pilots	3,920
8651	Firemen	2,420-3,420
1	Chief Fire Marshal	8,420
1	Chief Medical Officer (Deputy Chief)	6,420
11	Medical Officers (Battalion Chiefs)	5,420
5	Chaplains	2,280

The 49 Fireboat Stokers are included in the civilian list, and are paid at the rate of $2640 per year. The Fire Alarm Force—numbering 240—includes 7 Chief Dispatchers, 16 Supervising Dispatchers, 49 Telegraph Dispatchers, 21 Telephone Operators and 5 Radio Operators. The salary schedule of the Fire Alarm Service totals $708,322.00 with the Senior Electrical Engineer receiving the top amount—$6650.

Book Shelf

Fire Protection Year Book 1946-7, Published by Lomax, Erskine & Co., Ltd., Aldwych House, London, W.C.2, crown 8vo 210+ xxviii pp, red cloth cover, gilt lettering.

One more welcome sign of the return of peaceful conditions is the alteration of the title of the newest edition of the annual reference book of the Fire Service, and of all connected with fire fighting and fire prevention, from Fire Protection & A.R.P. Year Book to The Fire Protection Year Book 1946-7. (Published by Lomax Erskine & Co., Ltd., Aldwych House, London W.C. 2., Price 7/6 post free). This new edition has been completely revised and brought up to date in the light of the very great changes which have occurred since the end of the war. Much information has been added, and several sections which dealt with A.R.P. have been delayed.

In the preface, the Editor points out

that although the return of the Fire Service to Local Authority control has been promised, restoration cannot but take a considerable time yet, and the present uncertain conditions make an authoritive reference book even more essential.

As in past years, the contents are divided into sections for easy reference by means of stiff tabbed cards. These sections comprise; details of the N.F.S. by Regions and Fire Forces; Fire Brigades overseas; alphabetical list of N.F.S. officers with their postings; a list of Government Departments, Institutions and Associations; legislation relating to fire fighting and fire protection; water data; miscellaneous data all of which has been carefully checked, re-arranged and brought up to date; commercial and trade section, including a comprehensive list of proprietary names, a classified directory or buyer's guide, and an alphabetical list of the more important manufacturers of fire equipment. The final section, which is a great improvement on previous editions, comprises an entirely new and re-arranged index, allowing any item to be found with the minimum of difficulty.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of October, 1946.

Month Ending October 31, 1946

Wellesley, Mass.—Wellesley Woolen Mills, adj. plt. of Lenk Mfg. Co. and J. S. Cardingley Co. woolen mill, across Charles River, destroyed.
Medford, Ore.—Gulf Red Cedar Co. damaged.
Beverly Hills, Cal.—Brighton Medical Bldg. destroyed.
Bellefontaine, Ohio—New York Central Railroad station destroyed.
Toledo, Ohio—Bldg. occupied by grocery-filling station and apt. of Zodique Blain; and Glauser Greenhouse, 2½ miles east, destroyed.
Marcus Hook, Pa.—Cracking plt. of Sun Oil Co. destroyed.
East St. Louis, Ill.—Four whses. of North American Cold Storage Co., in National Stockyards, destroyed. Short circuit. Bldg. also occupied by Reithman Cheese Co., Auto Stove Works and Blue Moon Cheese Co.
Wallace, N. C.—Tobacco whse. of Hussey whse. and adj whse. of O. C. Blanchard and W. H. Farrior destroyed.
Grants Pass, Ore.—Toggery Clothing, Marshall Electric, Modeoday Dress Shop destroyed.
Columbia, S. C.—Main whse., office and adj. storage facilities of Binswanger & Co. and Columbia Bldg. Supply Dealers destroyed.
Okanogan, Wash.—Sawmill of E. Wagner & Son destroyed.
Grimsby, Ont.—Plt. of White Canadian Aircraft damaged.
Chicago, Ill.—McGrew Paint & Asphalt Co. damaged. Schenck Lumber Co. yard also damaged.
Marion, Ind.—Pressing and laundry bldg. and two-day collection of clothing at Brown Trublood Laundry damaged. Defective wiring.
Minneapolis, Minn.—Forest Lake motor garage destroyed; Vogel's Hotel damaged.
Gastonia, N. C.—McKelvie machine shop destroyed.
Houston, Tex.—United States Truck line yard damaged.
Americus, Ga.—Ginning plt. of Americus Oil Co. destroyed.
National City, Ill.—Two storage bldgs. of North American Cold Storage Co. damaged.
Ithaca, N. Y.—Five vacant barracks scheduled to house Cornell University students destroyed.
Portsmouth, Ohio—Store of Montgomery Ward & Co. damaged.
Thetford, Que.—Thetford Minds, whses. and offices of Tancrede Labbe, Regal Ice Cream plt., barber shop and five apts. damaged.
Waterloo, Ia.—Iowa Whse. Co. destroyed.
Kansas City, Kan.—Motor rebuilding plt. of Kansas Motors Co. destroyed.
Stockton, Cal.—California Laundry damaged.
Willows, Cal.—Whse., six miles north, owned by Berlinger Bros. destroyed.
Noblesville, Ind.—Plt. of Ball Bros. damaged.

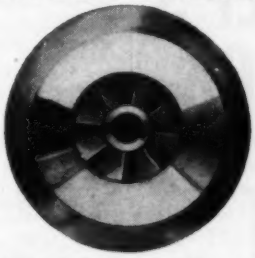
Casting a HALE IMPELLER

The Impeller is the heart of a Centrifugal Pump. Hale Impellers are cast in our own foundry . . . finished and polished with exacting care.

Picture of the two sides of a core used in casting a Hale Type ZL Impeller.

Molten bronze is poured into impeller molds, carefully prepared beforehand.

After casting, each impeller is finished, polished, rigidly inspected and tested. Hale Impellers are designed for greatest efficiency. Before assembly, they are separately and painstakingly balanced like a fly-wheel, thus assuring correct running balance. This thoroughness is typical of the design and manufacture of all types of Hale Fire Pumps.



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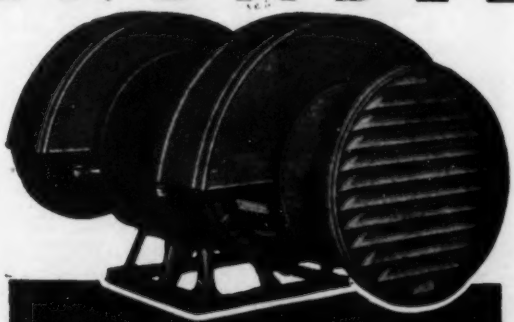

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GENERAL ALARM SIREN
You Can Depend On It ALWAYS

in Silver or in ***SIRENS—***

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An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to install and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M."

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MANUFACTURERS OF A COMPLETE LINE OF APPARATUS SIRENS

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55 Allen Street Rochester, New York

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By FRED SHEPPERD

485 Pages Profusely Illustrated

The Greatest Book on Fire Fighting Ever Published

Gives a practical, authoritative answer to almost every question that might come up in modern Fire Fighting practice.

A valuable reference guide for the progressive fire chief, and for the fire fighter studying for promotion.

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Caribou, Me.—Potato house of Kenneth Powers destroyed.
Fitchburg, Mass.—Administration bldg. and repair shop at Fitchburg Airport, owned by city, damaged.
Rolette, N. D.—Four business bldgs. including the Rolette drugstore, Rolette meat market, Beruhe's liquor store and Sorenson Hardware destroyed.
Ottawa, Ont.—Thomas Supply & Equip. plt. damaged. Explosion of glycerine and lipstick ingredients.
Bucyrus, Ohio—Mader business block occupied by Jay's Toggery, men's clothing store; Farm grocery store of Glen Quaintance, and lodge rooms of Junior Order of Mechanics and United Commercial Travelers, damaged.
Portland, Ore.—Buckeye Rooming House destroyed.
Yakima, Wash.—New plt. of Rainier Fruit Co. destroyed. Sparks from welding torch.
Hartville, Ohio—Packing house on Chapman Bros. celery farm, 1½ miles northeast, destroyed.
Springfield, Ohio—Business bldg. occupied by Diehl Hardware Co., City Grill and D. S. Smith Cabinet Shop, damaged.
Springfield, Ohio—Frances Hotel damaged.
Superior, Ohio—Superior Cement Corp., destroyed.
Albion, Pa.—Moose Club destroyed.
Milwaukee, Wis.—Plt. of Wisconsin Abrasive Co. destroyed.
Los Angeles, Cal.—Ross Bros., Inc., bedding and upholstery mfrs. storage bldg. destroyed.
New Orleans, La.—Lumber yard, dwelling owned by Abel Acosta; dwelling owned by Thomas Milligan; dwelling owned by Robert Bohmer; dwelling owned by Fred Habinstringer; dwelling owned by Charles Gardener; dwelling owned by Alice McQuinlan; dwelling owned by Howard Twickler, destroyed.
Fall River, Mass.—Shove Mills, occupied by Danbury Carroting Corp., Alden Corrugated Container Corp., Acme Clothing Co., Samuel Brian Co. and Merit Mfg. Co., destroyed.
Anacortes, Wash.—Anacortes Shingle Co. destroyed.
Livermore, Cal.—Whse. with 70,000 sacks of wheat, barley and oats, destroyed.
San Pedro, Cal.—France-Italian Co.'s cannery, Terminal Island, damaged.
Altamont, N. Y.—Fire destroyed the LaSalette Seminary.
Cleveland, Ohio—Webber Co. lumber yard damaged.
Athens, Tex.—Oil well at Tri-Cities field of Henderson County destroyed. Explosion.
St. George, N. B.—Plt. of St. George Pulp & Paper Co. damaged.
Nome, Alaska—Bon Marche dept. store and apt. destroyed.
Dartmouth, Mass.—Andrew B. Cushman School destroyed.
Franklin, Mass.—Garelick Bros. dairy farm destroyed.
Cushing, Okla.—Long-Bell Lumber Co. and Lauderdale machine shop destroyed. Turpentine jar bottom fell out.
Oxford, Pa.—Barn on farm of Fred Whiteside, R. D., destroyed.
Sprague, Wash.—Sprague Grain Growers whse. destroyed.
Birmingham, Ala.—Shed at old Bechtel-McCone-Parsons plt. modification center, leased by Aircraft Sales & Service, Inc., destroyed.
Murphy, N. C.—W. G. Phillips lumber plt. eight miles east, damaged.
Ottawa, Ont.—Candy factory of M. Loeb, Ltd., damaged.
Aberdeen, N. S.—Wesley Community Hall destroyed.
Deshler, Neb.—Whse. and bleaching room at Deshler broom factory, destroyed.
Carber, Calif.—California Alfalfa Mill destroyed.
Huntington, W. Va.—Pilgrim Laundry destroyed.
Canton, Ohio—Whse. of Ideal Furniture Co. damaged.
Danville, Va.—Processing plt. of Virginia Tobacco Co. destroyed.
Kingsburg, Cal.—Plt. of Kingsburg Cotton Oil Co. damaged.
Macon, Ga.—Timberlake Wholesale Grocery Co. damaged.
Muscatine, Ia.—Half block of business bldgs. occupied by Trout's super market, Clark's standard auto parts store, Muscatine Paint & Oil market and Your Cleaners, damaged.
Waterloo, Ia.—Flour City Box and Mfg. Co. damaged.
Boston, Mass.—Bldg. occupied by Cube Steak Machine Co. and Hurley's Log Cabin Cafe, damaged.
Lincoln, Neb.—First Natl. Bank destroyed.
Grants Pass, Ore.—Moore Lumber Products Co. destroyed. Exploding light plt.
Mt. Juliet, Tenn.—Grammar school destroyed.
Montpelier, Vt.—Supermarket of Atlantic & Pacific Tea Co. damaged.
Bishop, Cal.—The Tung Star Mine, producer of tungsten, destroyed. Defective water heater.
Fort William, Ont.—Sawmill of Great Lakes Lumber & Shipping Co. damaged. Overheated bearing.
Spokane, Wash.—Spokane Meale's Co.'s whses.

Fight Fire with . . .

***Strangle*AIR FOAM**

and FIRE-SNUFFER NOZZLES

A coating of StrangleAIR lasts for hours on any surface, horizontal or vertical. No fire can withstand its smothering effect. StrangleAIR is clean, white, non-toxic and will not injure paint, woodwork, furniture or carpet. Eliminates flashbacks and prevents formation of noxious fumes.

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are specially designed for fast, effective action with foam. Manufactured in standard sizes from 2½ GPM to 250 GPM and available through fire appliance supply houses.

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AMERICAN DIE & TOOL CO., INC.

EAST READING, PA.

"The Superior"

A MODERN *and* PROVEN

LIFE NET

The SUPERIOR LIFE SAVING NET is stronger than any other, because of the tested breaking strength of 1,800 lbs. of each individual rope.

The direct pull shock absorber system eliminates all friction and its greater resiliency provides for a safer, easier landing.

Made of Chrome Molybdenum steel, the frame may easily be folded for storage within a few seconds.

For the utmost in LIFE SAVING VALUE . . . "SPECIFY SUPERIOR".

For ECONOMY, have your old net converted into a "SUPERIOR".

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Fire Equipment Dealers to sell Morning Pride protected rubber firecoats, fire pants, fire mitts and fire suspenders.

Write today Morning Pride Mfg. Co., 1936 Home Ave., Dayton 7, Ohio.

WANTED

Old photos of horse and tractor drawn fire apparatus, alone and working at fires.
Latest photos (or recent) of fire apparatus, alone and working at fires.
Back issues of "Fire and Water Engineering" and Fireman's Herald," 1900 to 1915, inclusive.
Also one pair of Fire Trumpets. B. J. Stevens, 164 Seaview Ave., Jersey City 5, N. J.

FOR SALE

New chrome plated trim, 3 gated water thiefs, 2½" by 2½" by 1½" by 1½" all NST at $52.50 each prepaid anywhere USA. Doray Fire Equipment Co., 1924 Valley Drive, Syracuse 7, New York.

FOR SALE

Heavy Duty pumper truck. Year 1940. Continental 22R motor. Hale 750 G.P.M. Pump. Excellent throughout. Reasonable. W. Treuman, R.F.D. No. 4, Highway 130, New Brunswick, N. J.

and machine shop destroyed. Spontaneous ignition.

Huntsville, Ala.—New section of Jones-Baugh cotton whse. damaged.

Fort St. John, B. C.—Maintenance camp, Alaskan Highway, owned by Government, destroyed.

Hartland, N. B.—N. B. Potato Products, Ltd., dehydration and starch plt., destroyed.

Plymouth, N. H.—Plymouth Cafe bldg. and adj. bldg. of Moses A. Saliba, damaged. Occupants were New Plymouth Cafe, Louis Parissi, Balke's Clothing Store and Vanity Beauty Shoppe.

Pueblo, Colo.—Pueblo Laundry damaged.

Gardiner, Me.—Three barns, two silos at Oaklands estate of R. H. Gardiner, damaged.

North Weymouth, Mass.—Bradley Fertilizer plt. of American Agricultural & Chemical Co. destroyed.

Morton, Miss.—B. C. Rogers hatchery and dehydrating plt. destroyed.

Ogdensburg, N. Y.—Four business-apt. bldgs., heart of city, damaged.

St. John's, Nfld.—Capital Theatre, operated in Total Abstinence Hall by Newfoundland Amusements, Ltd., damaged.

Mount Forest, Ont.—Mount Royal Hotel destroyed.

Brundidge, Ala.—Lumber mill of J. H. Flack, destroyed.

Muncie, Ind.—Storage bldg. of Ball Bros. plt. destroyed.

Rockport, Ind.—Whse., granary and elevator at Hatfield destroyed.

Fall River, Mass.—Bldg. occupied by Barney's dry goods, clothing and furniture store of Barney Kahan; Puritan grocery store; Olive's five-and-ten store and apts. damaged.

Hoosick Falls, N. Y.—Three bldgs. of Colasta Corp., plastics plt. destroyed.

Ely, Nev.—Kelley Lumber Co. yard, damaged.

Duquesne, Pa.—Alexander Super Food Market, damaged.

Nashville, Tenn.—Colonial Dinner Club destroyed.

Fort Williams, Ont.—Great Lakes Lumber & Shipping, Ltd., yards, damaged.

Waterloo, Ia.—Herrick Refrigerator Co. damaged.

Colusa, Cal.—Colusa Theatre bldg. occupied by theatre, confectionery and sports goods stores, all owned and operated by N. C. Steele & Sons, damaged.

Gary, Ind.—Ten portable school bldgs., Roosevelt School Center, destroyed.

Provo, Utah—Storehouse and workshop of Utah State road commission, north city limits, highway 91, destroyed.

ELK HART IND

ELKHART

DEPENDABLE EQUIPMENT FOR EVERY FIRE DEPARTMENT NEED

Do not buy equipment without first consulting the Elkhart catalog. Let it be your guide to quality products.

PARTIAL LIST OF ELKHART PRODUCTS

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ELKHART, INDIANA

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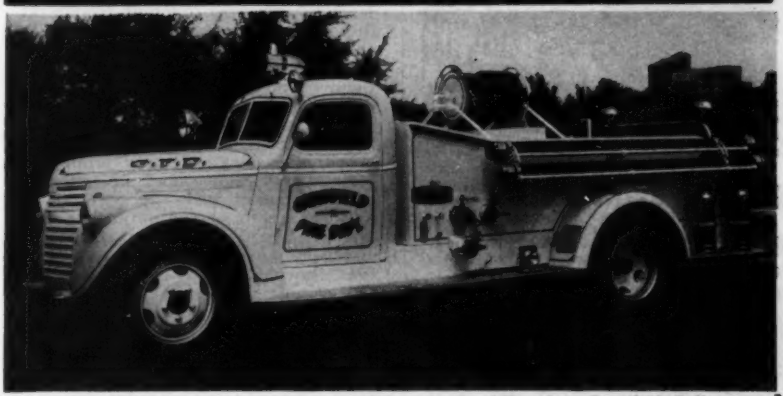

Central 500-Gallon Pumper mounted on 1½-ton chassis, delivered to Greenfield, Indiana.

WE BUILD A TRUCK FOR EVERY COMMUNITY, LARGE OR SMALL. WRITE US FOR DESCRIPTIVE LITERATURE

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4437 MANCHESTER ST. LOUIS 10, MO.
"Everything for Fire Fighting"

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For 110 years, CAIRNS EQUIPMENT has been "regulation" in most fire departments, both in America and abroad. In your 1947 purchases, insist upon the QUALITY for which CAIRNS stands.

Helmets in leather, aluminum, or FLINT-FLEX (plastic), in all sizes and styles, with the CAIRNS SHOCK-PROOF CUSHION LINING; warm turn-out clothing, rubber coats and boots, face shields, regulation caps; loose-leaf fire record books, secretary's record books; certificates, forms, etc.

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CAIRNS & BROTHER
Outfitters to Firemen Since 1836
444 LAFAYETTE STREET, NEW YORK 3

Fyr-Fyter equipment has proven its value in preventing small fires from becoming disastrous through the loss of life and property. Recent catastrophic fires with terrific loss of life emphasize the urgent need of fire protection. A complete line of Underwriters Laboratories labeled Fire Extinguishers.

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The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

THE USE OF FIRE POLICE

IN communities where there is no police department, or where the number of police is small, the use of fire police is essential. These men are usually volunteers who in most cases are given police powers for the duration of the fire emergency. Their job is to regulate traffic, maintain fire lines, prevent looting, and to aid the fire department wherever necessary.

Almost every chief reporting, whose city used fire police, stressed the need of endowing these men with police powers. Without such power their work would be ineffective.

In most cases, the cities using fire police are small, but a few of the larger cities, such as St. John, New Brunswick; Allentown, Pennsylvania, etc., use them regularly.

Readers are invited to send in their comments on the subject which will be continued in the December issue. Address communications to Round Table Editor, 24 West 40 Street, New York 18, N. Y.

Discussion of the Topic

John A. Huhn, Chief, Bellevue, Ky.: Our city is planning to use fire police. On October 9, thirty members of the Volunteer Fire Department were sworn in as special fire police. We have been having a lot of trouble at fires keeping people from getting in the way of the firemen. The good people want to help us but most of them only hold us back.

We are going to work out a system at fires where the older members direct traffic and keep those without the proper identification away from the fire.

They cannot make an arrest, but they can hold a person until the police arrive. They police football games and help during Hallowe'en. Whenever the chief of police needs some special police, he can call on the boys and they will help him out.

P. E. Tallman, Chief, Corvallis, Ore.: The fire police in our city are given full authority when the fire department is in action.

Thomas Carroll, Chief, Fairfield, Conn.: The fire police in our city have been sworn in as special policemen and therefore have authority as such.

In the absence of an organized police department, or as a supplement to a regular department, I believe fire police are very useful. We use them to regulate traffic and to maintain fire lines. In the case of small fires in homes or other buildings, they also limit the number of volunteers entering the building according to the order of the chief.

R. M. Clark, Kent, Ohio: We do not have fire police at this time, but several years ago, before we had an organized police department, we did. They only had authority at a fire. They saved a lot of hose from being ruined by people driving over it, and also stopped people from following the fire trucks to a fire.

H. H. Kudlich, Chief, Palmerton, Pa.: A state order provides for fire police as follows: "Section 1. Any volunteer fire company in any city, borough, town or township may nominate any of its members as special fire police. All special fire police so nominated shall, before they enter upon their duties as such, be confirmed by the mayor of the city, the burgess of the borough or town, or the chairman of the board of commissioners or supervisors of the township, as the case may be. When so confirmed and sworn and displaying a badge of authority they shall have full power to regulate traffic and keep crowds under control at or in the vicinity of any fire on which their companies are in attendance and to exercise such other police powers that are necessary in order to facilitate and prevent interference with the work of firemen in extinguishing fires.

"Section 2. Whenever any volunteer fire company is in attendance on a fire in any city, borough, town or township other than the one in which such fire company is organized any member of such fire company who shall have been sworn in as a special fire police shall have the same power and authority in such other city, borough, town or township as he would have in that by which he was appointed.

"Section 3. All special fire police when on duty shall display a badge of authority and shall be subject to

HERE IS THE QUESTION:

1. **Does your community use Fire Police?**
2. **If so, what authority do they possess?**
3. **Does their work cover other activities than fire duty? If so, what?**
4. **Where a community has no organized police department, do you believe Fire Police would be useful to the fire department. In what way?**

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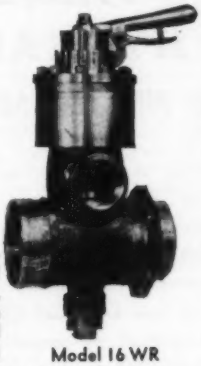
FOR FIRE ENGINE RELIEF



All Bronze construction. Internal Pilot operated. (Super-structure chrome plated when specified.)

Model 16 WR

Pressure range 20 lbs. to 300 lbs. furnished with heating jacket.

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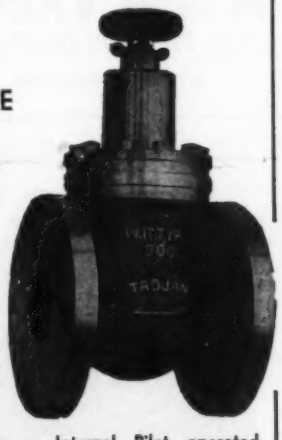

MODEL 22 RWR TROJAN

All Bronze — Internal Pilot operated. Capacities 0 to 1500 G.P.M. at 120 lbs. pressure. Pressure Range 20 lbs. to 300 lbs. and 20 lbs. to 750 lbs.

HOSE VALVES FOR PRESSURE REDUCTION
ALL BRONZE construction
Internal Pilot
Sizes
2½ x 2½ inch
2½ to 3 inch
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P. O. BOX 595 TROY, N. Y.

the control of the chief of police, if any, of the city, borough, town or township in which they are serving, or, if none, of a member of the Pennsylvania Motor Police."

Our fire police have been trained by the local police and we use them at public gatherings and to assist in regulating traffic in case of parades.

Otto J. Alletag, Chief, Warren, R. I.: Our fire police possess the same authority as any special fire officer. They can be called upon by the chief of the permanent police department in the event of an emergency.

They are very useful to the fire department in directing traffic and roping off the area where the fire is. Our fire police are instructed to go to every bad corner and direct traffic for the apparatus responding to a fire.

Charles W. Brice, Chief, Chester, S. C.: We have not used community police at fires since V-J Day, when the group was disbanded. They were deputized by the mayor, but their work wasn't very satisfactory. They did not want to cause hard feelings and wouldn't exercise their authority. We now use city and county police at our fires.

F. Henne, Chief, Rye, N. Y.: Our community does use fire police. Their duties are to maintain fire lines, handle the floodlight system at night, prevent looting at fires, direct traffic and assist the city police which are always present at fires. As far as authority is concerned, they are ordered not to make any arrests, as this might involve legal complications, but whenever possible refer anything suspicious to the police. Fire duty is their only activity at the present time.

Where a community has no organized police, a fire police patrol would be most useful for the reasons listed above. They should be given complete police powers by the local authorities.

C. E. Van Nattan, Chief, Colorado Springs, Colo.: On two occasions the Fire Department was called to stand by at one of our parks in the event of a riot. Other times, the off-shift has been used to stop cars from being parked in alleys during rodeo parades. They possess the same authority as regular policemen on these occasions.

In cases of emergency, the firemen perform duties other than fire duty such as, recovering bodies of drowned persons outside of the city, rescuing people stranded on high rocks, and any other duties that come under the heading of rescue work.

W. R. Miller, Chief, Nazareth, Pa.: We have twelve men covering an area of five square miles with a population of 15,000 people comprising Nazareth and neighboring communities. Their job is to control traffic and to protect firemen at work at a fire. They are also called for all emergencies, excluding strikes, where fire companies might be called.

They receive their authority under Act 74 of the General Assembly of the Commonwealth of Pennsylvania, enacted June 18, 1941. The text of the law is published elsewhere in this discussion.

Olander Lind, Chief, Kansas City, Kan.: We do not have what you term "fire police", but due to the fact that Fire Headquarters in the adjoining buildings from the police radio which we use, they always dispatch police cruisers to the scene of the fire. For

SAVE LIVES!
GET AT A FIRE FAST!
SPEED RESCUE WORK
with this amazing hi-speed
SAW GUN

QUICKLY CUTS THRU
ALL METALS
Stainless or Monel
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An Indispensable Fire-Fighting Tool

The Saw-Gun is an amazingly efficient Portable Power Saw that speedily cuts thru all metals, wood and other materials. Firemen equipped with this essential rescue tool can get at a fire or entrapped persons QUICKLY! Cuts rapidly thru heavy gauge steel. No need to waste precious time removing iron gratings, or other obstructions . . . cut them out of the way with the Saw-Gun! Saves time! Saves lives!

Easily attaches to any electric or air-drill, or flexible shaft. Uses ordinary hack saw blade for cutting. Very simple to operate.

Modern fire-fighters require modern tools. The Saw-Gun will prove an extremely valuable addition to your present equipment. Get all the details NOW!

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Radio-Active Treated, Mildew-Proof . . . Rot-Proof . . . Freeze-Proof . . . and with FLEXLASTICS* for longer Service life. Every length Pressure-Tested and Flat-Folding for easier, safer handling.
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Union Made **Prompt Delivery**

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Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Best Skilled Union Craftsmen in all the New and Standard styles. Our 50 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

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Fireman Cap Specialists for Over 50 Years

instance, when we receive an alarm, the moment the motor of the chief's car that responds is started, the radio is turned on. It usually takes about a minute for the tubes to heat up and then the receiving light comes in on the instrument panel. This is a green light. If I am covering the fire in my car, I then switch over to sending and the green light goes out and a red light comes on. This means that your microphone is open and every word spoken in that car can be heard by the dispatcher. I then say "Car 29 responding to a fire at 18th & Minnesota". Then I immediately throw back on receiving and hear the dispatcher acknowledge my message, and in the same transmission will instruct the police cruisers in that district to cover that fire.

I may say that the police of our city have certainly been very cooperative with my department. They are always there on the job, and of particular importance is the fact that they never try to take over when they get to the fire. They always go to the chief in charge and ask what he wants and they generally see that he gets it. I have often heard that some cities have trouble with the two departments getting along with each other, but I most assuredly want to compliment our police for their splendid cooperation.

W. H. Wayand, Chief, Scotia, N. Y.: We have no fire police in connection with our fire department. Any work that fire police might do is taken care of by our regular police of which at least two respond to every alarm of fire. However, I am of the firm belief that any community that does not have regular police should have fire police to take cars of the traffic problem and also to remove any persons from the fire area who might be reluctant to obey any such orders from the firemen.

J. E. Parrish, Chief, San Diego, Cal.: In San Diego, we do not have any special fire police.

All fire calls are broadcast over the fire and police two-way radio system and the police prowl cars pick up the calls and respond to the alarm in their district. If more police are required they radio in for additional help as needed.

Police forces at a fire follow orders of the fire department officer in charge of the fire.

The Fire Marshal and his deputies are sworn in as Deputy State Fire Marshals. They have all police authority as state officers.

A. D. Norris, Chief, Panama City, Fla.: My community does not have fire police, but I do have one member of the regular police force on night shift who walks the alleys and streets at night. If he finds any fire hazards, he reports them to me the next morning and I get them corrected. He is also on patrol for prowlers, but he is a very big help to me.

I believe that a community which does not have a regular police force should have fire police. If they have the right kind of authority, they would be of great benefit to the community as a whole.

Henry Dietrich, Chief, Durango, Colo.: Our community has an organized police force of three men; also a traffic policeman. We will put on a merchant policeman in a few days. This man is paid by the business men of

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AND PIPE LINE ACCESSORIES

M & H products, including pipe line accessories, are well known for high quality of material and expert workmanship. They are made according to standard specifications and have been used for many years throughout the country. Write for Catalog No. 34.

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BRAXMAR BADGES

Standard with firemen for 67 years. We can now supply nickel and chrome badges.

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the city and is on night duty in the business district.

We have no exclusive fire police, but the authority of the policemen mentioned above covers all ordinances pertaining to the violations of fire regulations.

Myron J. Moyer, Chief, Bellevue, Ohio: We do not have fire police. The members of the department make inspections. Enforcement is effected through city and state safety and fire laws. The firemen and city police report hazardous conditions which are taken care of by the best means possible.

In a community not having at least one policeman, I believe it would be wise to have at least one person detailed to look after the prevention of fire hazards.

R. E. Paré, Director, Montreal, Que.: We have fire police, but they do not come under our jurisdiction but are attached to the municipal police department as detectives.

They are in charge of investigations when there is a doubt as to the cause of the fire. They are working in cooperation with the Fire Commission of the city which deals with inquiries following a fire.

Being members of the police force, they are subject to be changed and returned to previous police duties they were performing before being appointed to the arson squad. In other words, they are police detectives on special duty.

Stuart M. Potter, Chief, Greenwich, Conn.: Fire police have operated in Greenwich for many years. The members are sworn as special police officers and have police authority when on duty. The fire police respond to all alarms of fire and assist the regular police force in establishing fire lines, regulating traffic, doing emergency first aid work and they assist the police department at any other time when requested by the police chief. They also perform salvage duty, and, if necessary, assist the firemen in fire extinguishing operations.

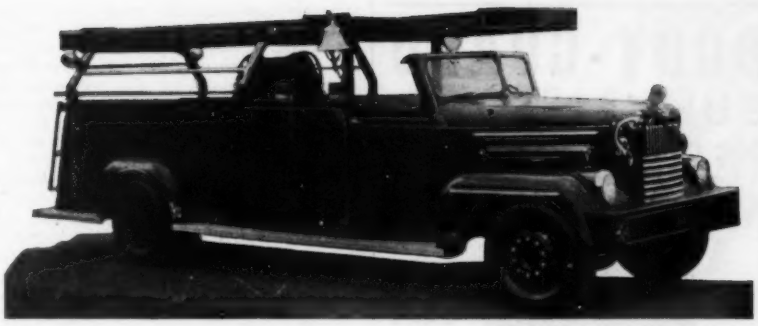
Current traffic conditions dictate that any community having a fire department, with or without a police force, should not be without a unit of fire police.

Napeen Boutilier, Chief, Boston, Mass.: The City of Boston has no fire police. However, we have an arson squad, and I believe they should have certain police authority. When they want to question certain persons under suspicion of arson, it is necessary to go to the police and solicit their help in bringing in the suspected person.

Charles A. Cunningham, Chief, Saint John, N. B.: Our city does use fire police. They are a group of men divided into two corps and serve on a voluntary basis. The membership is limited to approximately thirty men in each corps.

They are sworn in as policemen and issued warrants by the city council covering authority at fires or while guarding premises or ruins after a fire until the insurance companies take over. This authority is equal to or greater than that of a regular police constable.

Their duties include roping off streets at the scene of a fire, controlling crowds at large fires, caring for all goods and chattels at a fire, spreading rubber covers to protect



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FINEST IN THE WORLD ★ STREAMLINED ★ BALANCED CHASSIS ★ AMPLY POWERED ★ VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

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5 FOAM

The all-climate, dependable mechanical foam extinguisher » » » *It flows—covers—seals—extinguishes* » » » Highly effective on oil and gasoline fires—on Class A fires » » » Use with any kind of water—at any temperature—in all makes of equipment.

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BUNKER SUITS
FOR COMFORT & PROTECTION

WE ARE DISTRIBUTORS FOR
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We have been supplying **FIREMEN'S CLOTHING** for over 25 years.

Any fireman can have a catalog by writing—

BODY-GUARD MANUFACTURING CO.
ST. JOSEPH MISSOURI

Chief . . . .
ONLY 55¢ TO PUT OUT A CHIMNEY FIRE with "IMP"
CHIMNEY FIRE EXTINGUISHER

Save rushing to chimney fires over icy pavements . . . avoid slippery ladders and roofs by using IMP Chimney Fire Extinguisher. Just throw a 55c package "as is" on the hottest part of the fire in the stove, furnace or fireplace. The chimney fire will be out in jig-time without water or chemical damage. Recommended by fire chiefs, who always carry IMP in their cars for emergencies. Many volunteers carry it in their personal cars.

USE THIS COUPON FOR YOUR ORDER

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Please send me ..... dozen packages of IMP. I will honor your bill f.o.b. Bridgeport.

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STATE .....

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Add "IMP" Chimney Fire Extinguisher to your line. Write today for special distributor plan.

goods and chattels from water damage and removing goods where needed.

Their duties other than fire duties consist of assisting the police in the control of crowds at large gatherings or parades. This part of their duty is purely voluntary at the request of the Chief of Police for assistance.

H. D. Demonbreun, Chief, Nashville, Tenn.: We do not use fire police in our city. Our fire marshal and his assistant have police powers, but only use them in fire department matters.

C. W. Marcks, Chief, Allentown, Pa.: We use fire police in Allentown. They are sworn in and do traffic duty at fires. They also assist in our Hallowe'en community parade and recently in a parade for returned veterans of World War II.

Seth B. Gray, Chief, Las Vegas, N. M.: Each member of our volunteer fire department is designated as a fire policeman. He has authority to make arrests for running over fire hose, or any interruption in our fire fighting duties.

I believe they have a definite place in the absence of a regular police department, but I cannot conceive a town large enough to have a fire department and not a police department.

C. A. Hill, Chief, Jennings, La.: We have had fire police for many years. They have the authority of regular police, i.e., traffic and law enforcement, preservation of order and safety at all alarms.

Due to the concentration at the scene of fires, there is always the chance of burglary, or petty crimes. Then the fire police should have the authority to make arrests. These arrests should have the backing of city judges. There are always those "eager beavers" who race to fires, block traffic and in a thousand ways hinder the firemen. Turn your police loose on these violators and see the results.

John V. Snyder, Chief, Ashland, Pa.: We use fire police and find them very useful. They do police work at fires, keeping the crowd away from the fire area, directing and rerouting traffic at fires.

They have the same authority as our regular police when working at fires, or when used to direct traffic, etc., at parades or other special occasions. They are also used to work at some of our local football games as policemen.

I believe fire police are very useful to a community which has no organized police department. They can do very effective work at fires or when called upon to quell any disturbance or do police work in general, providing they are given the proper authority. I know of several communities where they have been doing very good work.

A. G. Schmick, Chief, Verona, N. J.: We have fire police, but call them fire wardens. They are given full and complete police authority.

They are very useful in regulating and controlling traffic, especially at the scene of the fire; in keeping unauthorized persons from entering buildings which are on fire; and in establishing fire lines. They should also remain at the scene after the fire department leaves, especially at bad fires, to protect the property until the owner can make arrangements to

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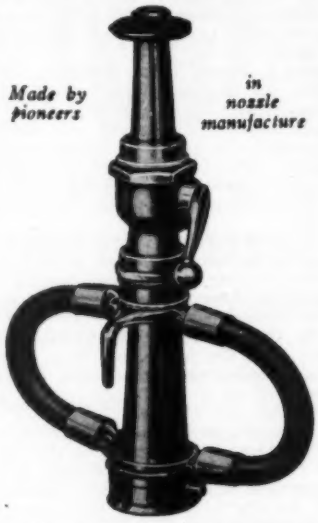

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George E. Gebelein, Chief, Blackwell, Okla.: Only in case of fire do we estab ish a fire guard. It is my jurisdiction to designate any fireman or other person for this job.

Where there is no police department, I believe firemen should be designated to watch for reignition and also to protect the property.

We always remain on the job after doing salvage work and clean-up until we make contact with the owner or agent. We then return to the fire station.

H. Case, Chief, Las Vegas, Nev.: In Las Vegas policing is done by the regular uniformed police officers. A radio car is dispatched to the fire and the police remain on duty as long as the fire chiefs want them. However, all firemen have police authority and can make arrests for any kind of violation.

If a community has no organized police department, then at least one person should be appointed as a fire police to keep the public from hampering the efforts of the firemen and to guard involved property from looters. This man should be a well known, high class individual who commands the respect of all the people of his community.

Paul Gunther, Chief, Winooski, Vt.: We have fire police in our community. They have the same power as a regular police officer. They may be called to do special work any time their service is needed.

I believe they are helpful in keeping order, directing traffic and preventing people from prowling around the inside of a burning building.

Sam Beam, Chief, Newberry, S. C.: The fire police in our community have all the authority that is possessed by any law enforcement officer, plus enforcement of special rules and regulations during the time of a fire.

Where a community does not have a regular police department, they should have fire police. Such a community undoubtedly will have a volunteer fire department and their whole time is taken up in fire fighting. Therefore it is necessary to have fire police to take care of traffic, crowds, etc., at a fire.

W. E. Casey, Chief, Crystal City, Tex.: We have fire police in our city, but their authority is limited to fire protection only. I believe fire police are useful to a community without a regular police department in that they give immediate protection to firemen and equipment.

C. O. Johnson, Fire Marshal, Bemidji, Minn.: Our community has fire police under the Fire Marshal's office.

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R. J. McAllister, Chief, Plymouth, Mich.: We do not use fire police in our community, although I believe that they are effective where no organized police department is present. The public is a great handicap to the fire department. If fire police were used the crowd could be kept back which would help operations at a fire an awful lot.

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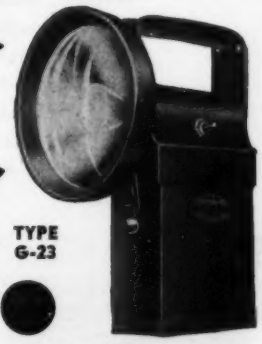

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